

Can the project be a database problem?

For example, I am the advisor for the OSU Dressage Team (an Equestrian team), and we host shows. We need to database the information regarding our riders, the tests that they wish to ride, their payment information, etc., and then we need to assign ride times based on rules, such as no rider can ride twice within a 45 minute period if it is a low level test, or within 1.25 hours if it is a higher level test. The output would have to be in several different formats. Anyway, it may be too simple of a problem, it just doesn't appear so to us. :-).

Thanks.

Deb Pence

ME

"Deborah Pence" pence@engr.orst.edu

Hi Bruce,

I saw your email about student projects, and while we don't need one of those, we are looking for 1 or 2 good student helpers in our computer support team in the Community Network, so I'm writing to ask if you know of any that are looking for work?

We prefer that they have good people skills as well as technical ability, and since the vast majority of our customer base is Windows machines, that is a required strength. We have a requirement that students work a minimum of 10 hours, and we can give them more than that if they desire.

Due to the training involved, we would prefer that they are planning to be here for at least the rest of this school year, preferably longer.

Please have any interested students send email to Admin.Help@oregonstate.edu to ask about an interview.

Thanks for any help,

Marilyn Wallace

Community Network

541-737-4510

From: "Bloomfield, Molly" <molly.bloomfield@orst.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>
Cc: "Mingo, Kendra" <kendra.mingo@orst.edu>

Dr. D'Ambrosio,

I am the Director of Curriculum Development for the Hydroville Curriculum Project (www.hydroville.org). We are part of the outreach program in the Environmental Health Sciences Center here at OSU.

As part of the expert group activities in our Indoor Air Quality curriculum, we would like students to be able to access a virtual school building on CD or online. This building would represent the middle school building that is having indoor air quality problems in the scenario.

We would like students to be able to

1. look at the building from all sides and then from the top.
2. strip off the roof of the building to look at the attic level with heating pipes, furnace in the new wing, bathroom vents and fresh air intake in the new wing. This view would correspond to the 2-dimensional HVAC attic level drawings.
3. cut off the attic level and see the main level of the buildings with classrooms, doors and windows and hallways. This view would correspond to the 2-dimensional floor plan.
4. be able to click on a room and take virtual tour of several classrooms that would have buttons that link to photos of problems in the school.
5. strip off the main level and see the lower level utility tunnel under the old building with the furnace and utility pipes. This corresponds to the 2-D HVAC utility tunnel HVAC drawing.

Is developing this building something that would fit into your senior project ideas? If so, I would like to talk with you and with your class about it. We have used students in senior graphic design classes to design our curriculum covers with very successful results.

Please call me at 752-1868 (I am working at home at the moment) if you have questions.

Molly Bloomfield
Director of Curriculum Development
Hydroville Curriculum Project
Environmental Health Science Center
Oregon State University
119 Weniger Hall
Corvallis, Oregon 97331-7302

Subject: Re: RFP: Computer Science senior projects course
Cc: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>
To: "Inform OSU" <Inform.OSU@orst.edu>
From: woodbd <brian.wood@oregonstate.edu>

Dear Bruce,

Would it be of interest for your students to develop a program for controlling an pump using an RS-232 interface? I have a device in lab that needs to be controlled this way, and it might make an interesting project. I don't know what kind of language would be best, but there are lots of resources for doing RS-232 in visual basic...

Let me know if this is the kind of thing you are thinking of, and I will prepare a 1 paragraph description.

Thanks,
Brian Wood

Subject: Computer Science senior projects course
From: "Gunadi, Haris" <Haris.Gunadi@oregonstate.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hello Professor Bruce,

I graduated from CS department this year and I am currently working with Services for Students with Disabilities (SSD) as Faculty. When I was a student, I developed database for SSD to organize testing services (for my CS410 project). Testing database purpose is to organize testing requests from students and professors. The database has created a more effective way to communicate with students, professors, and proctors.

Currently, I am developing web based application that will serve 500 students. Each term, SSD receives more than 1,500 requests from students. SSD decided to hire me this year to create a newly and improved database system to serve all students requests from testing services, note taking, book on tapes, and interpreting requests. This project will also involve Bookstore. Currently, I am using .NET, C#, and SQL Server. I am willing to work with students for their CS 462 project.

All forms that I created are completely accessible by all students that we serve (these include blind students). This might be a good opportunity for me to promote website design that complies with [Section 508](#).

Let me know if this project sounds good to you.

Our website is: <http://ssd.oregonstate.edu> and I also attach my presentation slides for my conference this coming Wednesday.

<<SSDPresentation2B.ppt>>

Haris Gunadi

Services for Students with Disabilities

Alternative Format / Technology Coordinator

Phone: 737 - 8582

Subject: RE: Computer Science senior projects course
From: "Moule, Jean" <moulej@orst.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hello,

I was interested last year and never caught you in by phone. So I'll tell you what I have been wanting: I teach a course on the web with students all over. I've been wanting a way for them have a graphic of Oregon that they can input their name and town on, in the correct location, and then it would be displayed with all of the entries. Not sure how a program could be integrated with Blackboard, however, I think there are others that might be interested. For all I know, something like this already exists.

Just another way to keep in contact when all are so scattered.

Please let me know if this is a viable project. I have a feeling you are wanting something much more complex.

Jean Moule
541 737-3529

School of Education

From: "Dee Kaseberg" <dkaseber@ncesd.k12.or.us>

To: <dambrosi@cs.orst.edu>

Subject: Senior Projects

Dear Mr. D'Ambrosio:

The following e-mail was forwarded to me from Sandy Macnab with the Oregon State University Extension Office here in Sherman County.

I work with the Sherman County Fair Board as their secretary in my spare time. Sandy and I were just discussing the need for a computer program that could help with our open class entries, placing and premium payments for the annual fair. I realize that there are programs out there for this - but they are very expensive and not set up for fairs as small as ours. Currently we do all of our entering and calculating premiums by hand, which is very time consuming and leaves a lot of room for errors. We would love it if we were selected to work with you and a group of students on setting up a program that would work for us (we would also be willing to share this program with Gilliam and Wheeler Counties who are similar in size to us).

If this is a possibility, please contact me.

Dee Lieuallen-Kaseberg
Sherman County Fair Secretary

Executive Director
Sherman County Commission on Children and Families
P.O. Box 425
Moro, OR 97039
541/565-3200

Subject: RE: Computer Science senior projects course
From: "Masoni, Sarah" <sarah.masoni@oregonstate.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

The Food Innovation Center needs a project management system that ties in the existing Department of Agriculture customer management system. We need to be able to track customers through the intake, through projects and after completion. We have some preliminary ideas as to what we would like in the program, we haven't been able to find a system that meets our needs.

Let me know if you would like additional information and I will put your group in touch with the appropriate people.

Thank you

Sarah Masoni
Product Development Manager
Food Innovation Center
(503)872-6655

From: Scott Kveton <kveton@oregonstate.edu>
To: dambrosi@cs.orst.edu
Subject: Re: RFP: Computer Science senior projects course

Hey Bruce,

- > OSU computer science will be offering its senior projects
- > class (CS461-462) again this coming winter-spring. This is a two quarter
- > course in which small teams (typically 2-3 members) of computer science
- > seniors undertake complete software development projects, as a
- > capstone experience.

I don't know if you remember me or not, but I took some classes from you when I was getting my degree back in the mid-90's ... I graduated in '97.

- > We are looking for project suggestions for the course. An interested
- > party should submit a one paragraph project description, and be
- ...snip...
- > proposer is the team's customer, and the course instructor (Bruce
- > D'Ambrosio) is each team's manager.

This is fantastic and I think I could possibly help. I'm the Director of the newly formed OSU Open Source Lab where we're going to be looking at doing projects just like this. I think if we could tie it in with a Senior project students would not only learn about the software development cycle but also possibly learn the open source vocabulary giving them another fantastic tool as they go into the work force.

We actually have several projects that we could tailor to this. I'd love to get together with you and talk over some of the possibilities.

- > It would also be helpful if proposers could attend an early class meeting
- > in January to spend 10 minutes talking about their project, but this is not
- > mandatory.

Would not be a problem ... would be willing to devote a great deal of time to this.

Scott :-)

More details from a followup conversation:

"Build a web-based, database-driven application that parses mail log files and presents the output in an easy to use interface for 'tracking' email. This application would be used by help desk users to track mail usage and detect, debug and resolve problems without involving system

administrators. The final product would be modular so that you could plug new functionality in down the road."

Central IS currently relays mail for almost everyone on campus. We do all of the anti-spam and anti-virus rejection for campus as we have some open source tools that make it easy for us to do that (and very, very cheap). I'd like the above tool to tie into the help desk that we have for use on campus (again, another help desk tool) so that help desk users can track mail.

We actually have a set of libraries that the group could use and contribute to for doing authentication against LDAP, managing errors and making it easier to insert documentation in the web application.

I would be more than happy to help get this started for the students and then at the end of the project we could open source the code and give it a home in the OSL so that (if it is a good tool) it can take on a life of its own.

Subject: RE: Computer Science senior projects course
From: "Hannaway, David" <david.hannaway@oregonstate.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>
Cc: <songzh@enr.orst.edu>, <jiaji@cs.orst.edu>

Bruce:

Thanks for the note. I've participated in these projects before and would be willing to serve as a project mentor. Much of my work is web-based development; database design, development, maintenance, etc. Song and Jia Jin have been working with me recently and perhaps they can help me define a project that would be suitable (challenging and appropriate level). I'm traveling in SE Asia at the moment, but will be back the beginning of December and would be available in January when things get rolling.

David

david.hannaway@oregonstate.edu
Department of Crop & Soil Science
Forage Program Director
URL: <http://forages.oregonstate.edu/>

addl info from followup conversation:

Yes, I know some about GIS. There are two choices to implement a simple GIS system. Simpler one is to use ESRI Arcmap, ArcIMS etc which have been already installed on our Engineering machines. The harder one is to use totally free sources. Students need to install DM solution's Mapserver, Postgres, Postgis, PHP, etc by themselves then use these packages to build up a GIS system.

The final GIS system could like a motel admin system. You can get some idea from:

<http://web.engr.oregonstate.edu/~songzh/>

Song

Subject: Senior projects class (CS461-462) project suggestion
From: "Nafshun, Richard L." <Richard.Nafshun@oregonstate.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hi Bruce,

I have a possible project (I have broken it up into two components)

1. I maintain a dynamic Excel spreadsheet containing student logins, students passwords, and course scores. Using a web browser, students login and view their individual course scores.
2. I maintain a dynamic Excel spreadsheet containing student logins, student passwords, quiz questions and answers. Using a web browser, students login, view several quiz questions, and enter answers. The answers are automatically evaluated and scores are posted in the dynamic spreadsheet. It would be desirable to have multiple choice questions as well as numerical answers with tolerances.

Thank-you for your consideration,

Richard

Dr. Richard L. Nafshun
Department of Chemistry
Oregon State University
Corvallis, Oregon 97331-4003
Voice: (541) 737-6742
nafshunr@chem.orst.edu

Subject: Possible project for Seniors
From: "Murphy, Glen" <Glen.Murphy@orst.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hi Bruce

I am currently using an old DOS-based piece of software for 1) teaching in my senior FE441 Production Planning and Control class and 2) for research related to recovering more value from trees when they are being cut up into logs. The software was originally written in the early 1980s and was last updated in the early to mid 1990s. There are a few other pieces of software around doing similar things but they too are DOS-based early 1990s products.

The students, both undergraduates and graduate students using it for research, get very frustrated trying to use this software. Im old enough for it not to bother me too much but I do think it is time for a change. Im hoping one of your teams might be interested in working on this problem. A brief description of the problem follows:

=====
The forest industry is a major generator of income and jobs for the Pacific Northwest. It operates in a globally competitive marketplace where buyers of forest products and investors have choices. Viability of the industry can be maintained through a number of measures including cost control and recovering maximum value from the resource.

Research has shown that a significant source of value loss occurs when trees are cut up into logs. Each tree stem is different due to different dimensions and quality characteristics. Each tree can be cut up in many thousands of different ways depending on what markets are being supplied. [In the forest industry, jargon for cutting a tree into logs is bucking.]

Software is required to optimally buck tree stems and compare the value of these solutions with what the loggers actually cut from the stems. The value will be dependent on a quantitative and qualitative description of each stem, market prices for different log types, and detailed specifications for each log type. Optimal bucking in existing software is solved using a dynamic programming or shortest path network formulation. As well as comparing optimal with actual value recovery, a user will want to be able to store sets of tree stems in a data-base so that repeated what-if analyses for other market scenarios can be evaluated.

The software initially will need to be run on a PC. If possible it should also be designed so that it can accept stem description data collected on a PDA in the forest.

=====
Ill be very happy to spend time acting as customer and interacting with your students if this project is selected. The optimizer for bucking isnt too difficult. Ive written a couple of programs myself in BASIC and Visual Basic that use the algorithm so I can explain that side of things for the students.

Cheers - Glen

=====
Dr. Glen Murphy
Professor in Forest Operations Analysis
Forest Engineering Department
Oregon State University
Corvallis, OR 97331
USA
ph: (541) 737-2192

From: "Kevin Gartner" <keving@geofolio.com>
To: <dambrosi@cs.orst.edu>
Cc: "Eldon Metz" <exmetz@regence.com>
Subject: RE: FW: Computer Science senior projects course

Bruce,

My wife forwarded me your request for proposals, and a couple of us independent former Rogue-Wavers are thinking of a proposal that we believe is compelling. We hope that proposals can come from members of the general community as well as from OSU faculty and staff. Is that true? If proposals can come from an ad-hoc group like us, and if you find the complexity of this project manageable, then Eldon and I would work on defining the project more clearly and crafting the one-paragraph proposal you seek.

The basic problem statement is that various barriers keep software tools for managing and rendering spatial data from being properly coupled with software dealing with other aspects of the problem domain. We propose that a team of students address this problem by adapting an existing open source project, Deegree (deegree.sourceforge.net), to function as a plugin to another open source project, Eclipse (www.eclipse.org). As both Eclipse and Deegree are themselves complex and in constant evolution, a project to integrate them has the potential to become too complex. To avoid the potential feeling of failure we need to either (a) pick a relatively simple subset of the general problem that is sufficiently inspiring to be motivating yet doable by a group of 2 or 3 students with little supervision (such as a system configurator plugin or a proximity calculator plugin, or (b) identify a complementary set of tasks that are delegated to multiple groups working in coordination.

The appeal of the latter is that students learn how to coordinate at multiple levels and presumably make more visible progress. It might also form the basis of a multi-year program that fits into the College of Engineering's strategic vision for scalable technologies. Deegree is currently oriented to GIS problems, normally at the community or regional level, but why couldn't it be adapted to floor plans, machine vision, or printed circuit boards as well? We have to be careful not to go overboard, but it seems to me that there is the potential to develop a family of plugins that operate at different spatial scales addressing various aspects of problems common to the several scales. Avoiding 3-D aspects of spatial problems might be wise until the base technologies are more stable and proven.

Getting two feet back on the ground, consider a plugin I'll call PlanViewBufferZoneDisplay. This plugin would simply use Eclipse's SWT to

render a plan view of the buffer zone within X feet (or meters) of a given point, line, curve or polygon together with a composite set of user-selected features for a well-defined dataset. Standards and test suites that help students get and stay on the right technological track can be found at www.opengis.org.

Let us know if this has potential and how we might help more clearly define a five-month project that fits your objectives.

Kevin.

To: dambrosi@cs.orst.edu
Subject: Re: RFP: Computer Science senior projects course
From: John Sechrest <sechrest@peak.org>

Hello Bruce,

I would like to suggest the following projects for your class:

1) Graphviz and more Collaboration.

Graphviz (<http://www.graphviz.org>) is a way to dynamically look at graphs. Dia (<http://www.lysator.liu.se/~alla/dia>) is a diagramming tool. Wiki's are a way to encourage lite weight collaboration.

<http://www.c2.com/cgi/wiki?RunningYourOwnWikiFaq>

the goal of this project is to add Graphviz style dot file import and export into DIA, and to include Graphviz dot parsing and display into a wiki rendering engine (preferably twiki or purplewiki)

(<http://www.blueoxen.org/tools/purplewiki/>)

2) WIKI + Mail + IRC

Build a gateway process that would allow mail that is sent to be interpreted as a conversation with a wiki.

Wiki words defined in the email, would arrive in the wiki.

Changes to the wiki would generate email. So that you could explore an idea and see that idea grow in the wiki.

In addition, add a wiki rendering tool to an IRC client, so that it is possible to

connect the IRC conversation to a wiki. This then needs

to have a bot which will collect and post the IRC conversation into appropriate wiki words. So that an IRC conversation gets integrated into the wiki space.

3) Distributed event calendar -

Provide a PHP Mysql driven tool set that will enable a distributed team of people to manage an event.

An event may be something like: a blood drive, a conference, a workshop, a robotics tournament, a KSR race , any event where there will be many people coming, with sessions that need to be organized, with money changing hands, and with information needing to be collected. Make this a generic tool, so it can be used for all of these events. Provide a calendar view, a task view, a financial view, a attendee view, an admin view and a volunteer/employee view.

Subject: Idea for computer science project
From: "Heppell, Selina" <selina.heppell@oregonstate.edu>
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hi Bruce,

I have been working with Eli Holmes of the NW Fisheries Science Center on extinction risk models for endangered species that utilize diffusion approximations from the mean trend and variance of a time series of abundance. She has a number of papers on the technique (which is quite simple, in its basic form) as well as some non-user friendly Matlab code, which she is happy to share. What we are looking for is a user-friendly interface that biologists and resource managers could put their data into. There is a JavaScript program that was developed for salmon, but it is too specific - we need something that can run the model, do some resampling or other sensitivity analyses, etc. Let me know if students in the class would be interested.

Cheers - Selina

~~~~~  
Dr. Selina Heppell, Assistant Professor  
Department of Fisheries and Wildlife  
104 Nash Hall  
Oregon State University  
Corvallis, OR 97331  
phone: 541-737-9039; fax: 541-737-3590  
FALL TERM: Hatfield Marine Science Center, 541-867-0334

Subject: CS project  
From: "Gamroth, Mike" <Mike.Gamroth@orst.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Bruce:

We have a student working on an Access database for managing commercial beef herds in Oregon. While the student knows the information needed by beef managers and can work with Access, he says he would appreciate some support in making the database user-friendly and packaging the final product professionally to represent OSU well.

Is this the kind of opportunity that would benefit your students? I could provide some coordination, however the students would likely just arrange times to work together.

*Mike Gamroth*

**Professor, Extension Dairy Specialist  
112 Withycombe Hall  
Corvallis, OR 97331-6702  
phone: 541-737-3316  
fax: 541-737-4174  
cell: 541-740-6853**

Subject: FW: Computer Science senior projects course  
From: "Riebold, Thomas W" <thomas.riebold@oregonstate.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Bruce,

I am interested in talking to you about your request. I am a veterinarian in the College of Veterinary Medicine. I work in the teaching hospital with anesthesia being my specialty. I do a lot of record keeping as part of my work and would like to investigate having a computerized anesthetic record. There are some very elegant record keeping systems that interface between the anesthesia monitors that are very expensive and only found in tertiary care teaching hospitals. Duke comes to mind for that type of system. What I have in mind is essentially an electronic anesthesia record with a person inputting data for heart rate, respiratory rate, blood pressure, etc. After the anesthetic procedure is over, the data would be sent to a printer, the record printed and put with the patient case record.

Let me know if this something that the group would undertake or if you need more information before making a decision.

Thomas Riebold  
Vet Med  
7-2858 or 7-6951

Subject: FW: Computer Science senior projects course  
From: "Clarke, Sharon" <sharon.clarke@oregonstate.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>  
Cc: <danmiller@earthsystems.net ...snip... kelly.burnett@oregonstate.edu>

Hi Bruce,

My co-workers and I would like to propose a senior class project. We have been involved in a project for the Coastal Province of Oregon to delineate streams, stream attributes, and identify relative landslide susceptibility and debris flow runout paths and deposition using digital elevation models (DEMs), precipitation, and vegetation. More information about this project and program documentation can be found at [http://www.fsl.orst.edu/clams/prj\\_wtr\\_brd\\_indx.html](http://www.fsl.orst.edu/clams/prj_wtr_brd_indx.html). The program is written in FORTRAN and can be compiled for either a UNIX or PC environment. We need a user interface for these programs. The program has an extensive user defined parameters and instruction file (attached) that should be part of the user interface. If appropriate, students could also help in setting up a better data structure for recording metadata and user-specified parameters in the output data files. It would also be possible to write software that could be used for calibration of the model. Dan Miller does this now on a piecemeal basis whenever he wants to calibrate something, but there is no consistent and user-accessible set of programs developed. Dan Miller is located in Seattle and Kelly Burnett and I are located here. We are willing to give an overview of this project to the class and are available to meet with the students throughout the projects' timeframe. Let me know if you have any questions.

Thank you,  
Sharon Clarke  
Forest Science Department  
Oregon State University  
PNW Research Station  
3200 Jefferson Way  
Corvallis, OR 97333  
(541) 750-7288  
Sharon.Clarke@oregonstate.edu  
FAX (541) 750-7329



[instructions.txt](#)



[parameters.dat](#)

Subject: RE: Computer Science senior projects course  
From: "Koski, James" <James.Koski@orst.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Bruce,

At the OSU Student Health Services we are planning to send out RFP's for several new software systems- Practice Management System, Electronic Medical Record, and Laboratory Information System. We would like to perform a Return on Investment (ROI) Analysis. Ideally we would like to identify baseline costs or inefficiencies of using a manual or paper system. Then, estimate cost savings, improved efficiencies, or improved quality after the software systems are implemented.  
Is this the type of project you are looking for with your "software consultancy".

James R. Koski, MD, MPH, CHES  
Staff Physician  
Student Health Services  
Oregon State University  
201 Plageman Building  
Corvallis, OR 97331-5801  
Office Phone Number 541-737-7579  
Clinic Phone Number 541-737-9355  
Clinic Fax Number 541-737-4530  
James.Koski@orst.edu

It's A Great Day to Be A Doc!

Subject:

From: "Hackleman, David" <david.hackleman@oregonstate.edu>

To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Bruce: I read youre looking for projects for CS type students, and I dont know if these communications projects strike your (or their) fancy, but here are a couple:

1. We have a project on putting Fuel Cells at the local land fill to generate electricity. We have folks at CV HS, OSU, HP, CH2M Hill, and PCNG that are all involved. We need a web based tool to allow us to communicate effectively, keep track of who all is involved, retain history of tasks, and offer some place for others to learn status, apply to join, etc. Students at CVHS will probably be assembling a rudimentary web page, but making that have some longevity by integrating it into the OSU system would be helpful.
2. An OSU campus group is just now starting on the implementation of BioDiesel as well as possibly synthesis of it on campus for use. A similar web communications package would be great.
3. One group in ECE 44x is working on developing systems to telemeter data from the top of Marys peak down to Corvallis, but at that point, a good method to put the materials on the web for access as well as data retention processes will be needed, and likely your CS folks will have more expertise in this area.
4. I am running a science fair that is to happen in March. We could use an interactive web system to allow folks to register, retain information on the individuals and the status of their work, be confidential, and enable them to not need to enter redundant information. This fair is aimed at High and Middle School students as participants. Getting a way to confirm that information is getting to the students is also a great opportunity.

In essence, the bottom line is that it would be really nice to have a product that you could launch that would create a web-package for a start-up organization, track stuff and enable effective communication without requiring folks in the organization to be as well versed in the system as someone with considerable computer science background.

Hence, I see four possible projects, three are specific to current projects going on and a fourth is a more generic package generation opportunity.

In another direction, our Computers and Facilities committee in ChE has an ad-hoc committee working out a way to allow us to decide which simulation packages to keep (and / or buy) for our students to utilize. Determining the criteria for selection and making the decisions could use some advice from CS folks that know some of the trade-offs or can help understand the demands the packages might offer on systems.

So, I guess I found a fifth potential project, but it isnt quite as capstone oriented.

David Hackleman  
[David.Hackleman@oregonstate.edu](mailto:David.Hackleman@oregonstate.edu)  
Linus Pauling Chair  
Chemical Engineering  
Oregon State University  
(541) 737-8988  
<http://che.oregonstate.edu/people/faculty/hackleman.html>

From: "Jaga Giebultowicz" <giebultj@science.oregonstate.edu>  
To: "Bruce D'Ambrosio" <dambrosi@cs.orst.edu>  
Subject: RE: FW: Computer Science senior projects course

Thanks for responding. I am excited that we'll have a student help us.  
He/She will be able to save us a large number of hours of manual counting.

I do not have experience with this kind of software and we do not have any commercial one. NIH image may be helpful, it is downloadable from the NIH site. Besides this hint, it will be part of the project to figure out what's needed.

Sincerely,

Jaga Giebultowicz  
Associate Professor of Biology  
Oregon State University  
Department of Zoology  
3029 Cordley Hall  
Corvallis OR 97331

Ph: 541 737 5530

Fax: 541 737 0501

<http://www.cgrb.orst.edu/mcb/faculty/giebultowicz/index.html>



(These people are very excited about the prospect of a student project...)

From: CarolCoren@aol.com

Subject: FIC client management system

To: dambrosi@cs.orst.edu

Cc: john.wells@oregonstate.edu, sarah.maroni@oregonstate.edu

Hello:

Sarah Masoni passed on her note to you about our client management system along with your response. I had placed a call to you and others in your department about this a few weeks ago and learned that there is a program near to Portland where people are working on OSU computer software programs. We are eager to have help from one of the seniors to put a robust CMS to work and to integrate the efforts of the two enterprises that are engaged in advancing food related enterprises here in Oregon: the OSU and the Oregon Department of Agriculture.

Please cite me as the contact person for this project and indicate to me what you require from us in the way of work order or project description.

Thank you.

**Carol Coren**

**Community Programs Specialist**

**FOOD INNOVATION CENTER**

**COLLEGE OF AGRICULTURAL SCIENCES**

**OREGON STATE UNIVERSITY**

1207 NW Naito Pkwy, Suite 154

Portland, Oregon 97209-2834

Telephone 503-872-6657

Cell Phone 215-939-4094

FAX: 503-872-6648

carolcoren@aol.com

carolcoren@oregonstate.edu

Subject: Computer Science senior projects  
From: "Connor-Smith, Jennifer" <jennifer.connor-smith@orst.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

I have a potential suggestion for the CS senior project course, although being a non-programmer and years away from my last calculus class, I have no idea whether this project would be manageable or ridiculously complicated.

For my stress and coping research, I collect data on heart rate (using EKG sensors) and skin conductance (essentially the sweatiness of peoples palms). The problem with the data is the presence of movement artifacts if the sensors are tugged when the participant moves their arms or legs, errors are introduced into the data. The errors are easy to see visually in the heart rate data, because the program shows the standard heart beat rhythm (essentially a graph of time on the X axis and mVolts on the Y axis). When the sensors are tugged, the orderly heart beat pattern will temporarily degenerate into chaos. Unfortunately, editing out the errors by hand is extraordinarily time-consuming (at least an hour of editing per participant), and not particularly accurate. By hand, it is possible to delete the problem data, but there is no good way to determine the correct interval between the beat preceding the problems and the beat following the problems. For simple heart rate analyses, this is not a problem, but for analyses of heart rate variability (the extent to which the timing between beats is consistent vs. irregular), it becomes highly problematic to space beats arbitrarily. Ideally, after problem data is removed, the beats on either side would be spaced according to something like an average of the interval between the five beats before and after the problem data. This has always struck me as the type of task at which computers excel and people do not.

Essentially, I think Im looking for a program that would be able to:

1. Recognize when there has been a deviation from the expected EKG pattern
2. Either a) remove the problem data from that time interval and space the heart beats preceding and following the data based on average inter-beat intervals or b) replace the problem data with data matching the average heart beat data for that participant
3. Adjust the placement of time specific markers that indicate significant events in the study to account for any deletion of data along the time line. (e.g., If a marker is placed at the 90 second point in the study, and 2.5 seconds of data is deleted prior to the 90 second point, the marker should be adjusted to fall at 87.5 seconds the placement of the marker in relation to the data is important, the time at which the marker is placed is not).

This data acquired by the psychophysiology software can be exported to a text file, so any changes to the data could happen outside the program. If there is any chance that this might be a viable type of project, I could forward copies of the manuals for the psychophysiology program, sample data, the demo version of the data acquisition software, or anything else that could be helpful.

Best wishes,  
Jennifer

---

Jennifer Connor-Smith, Ph. D.  
Assistant Professor  
Oregon State University  
Department of Psychology  
204 Moreland Hall  
Corvallis, OR 97331-5303  
(541) 737-9235  
fax: (541) 737-3547

Subject: Computer project  
From: jon luke <jon.luke@oregonstate.edu>  
To: <dambrosi@cs.orst.edu>

Bruce,

Would setting up a complex data base in file maker pro qualify with your student as a project? We are putting together a teaching and records keeping database for our aquarium program. I want to check before we write up and submit a project.

Jon Luke  
Visitor Center Manager  
Oregon Sea Grant  
OSU Hatfield Marine Science Center  
2030 South Marine Science Drive  
Newport, Oregon 97365-5296

Phone (541) 867-0357  
Fax (541) 867-0320

## CS461-462 PROPOSAL

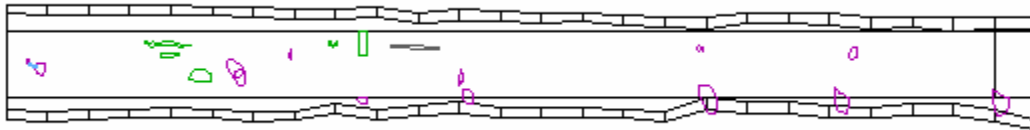
Proposer:

Dr. James Funck  
Associate Professor  
Department of Wood Science and Engineering  
134 Richardson Hall  
737-4207  
[Jim.Funck@oregonstate.edu](mailto:Jim.Funck@oregonstate.edu)

Topic:

Develop a program to graphically display logs and boards (flitches) using data output from an optical imaging system and log sawing simulation model. The logs and boards contain internal features that must also be displayed. Scanning densities around the log and along the length of the log or board are variable. Because the aspect ratio will result in a very thin, long object, zooming and panning capabilities are required. The objects must also be able to be rotated in 3-D space. Simple examples are shown below. The end product would need to visually look like a board or log.

Flitch:



Log:



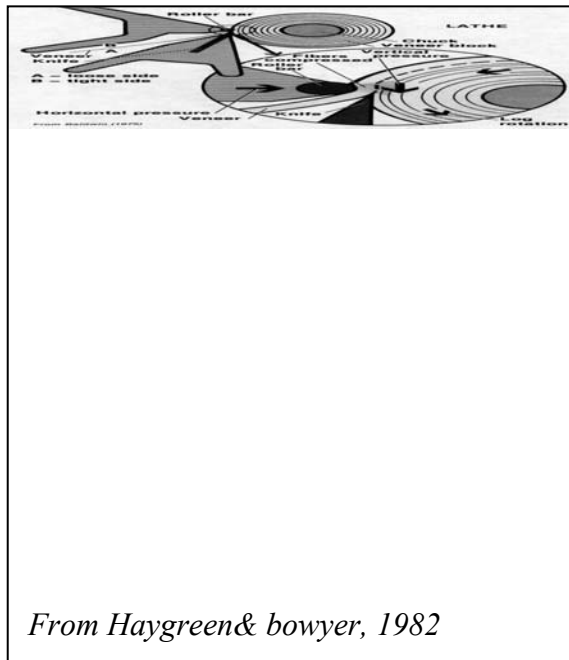
## CS461-462 PROPOSAL

Proposer:

Dr. James Funck  
Associate Professor  
Department of Wood Science and Engineering  
134 Richardson Hall  
737-4207  
[Jim.Funck@oregonstate.edu](mailto:Jim.Funck@oregonstate.edu)

Topic:

Develop a program that will graphically display a log and its internal defects using data provided by an optical imaging system and then peel the log into thin sheets of veneer while keeping track of the defect locations and characteristics. This information will be passed to an existing program that clips the ribbon of veneer into individual sheets. The main program would keep track of the log data and resulting veneer sizes and grades. An example of the peeling process is shown below.





Subject: RE: Computer Science senior projects course  
From: "Wang, Susan" <susan.wang@oregonstate.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>  
Cc: "Beach, Gary L" <Gary.Beach@orst.edu>

Dear Mr. DAmbrosio:

Thanks for offering the software consultancy course. I see an opportunity for one project that will be beneficial to the Office of Institutional Research (IR) at OSU. The project is described as follows.

### **Incorporating SAS Output in Microsoft Excel**

As an Institutional Research Analyst in the Office of Institutional Research (IR), I have been using SAS to prepare statistical reports for the IR Enrollment Summary, Fact Book, and Graduation Summary publications. As part of this process, I need to transfer SAS output to Excel. The basic method I use is to copy and paste. This method is not efficient and can create problems and even errors. I need to have some programs written that can automatically transfer SAS output into MS Excel tables in the format I want; i.e., development of templates. The Office of Institutional Research at Portland State University has been successfully using XML to automatically transfer data from SAS to Excel. SAS Institution Inc. is currently working on methods for importing SAS output into Excel workbooks or Word documents. I would like to have a program to specifically address IRs needs for statistical reporting.

Our office director Gary Beach is very supportive of this project. I would enthusiastically welcome the opportunity to work with your brightest and best-trained students on this project.

Sincerely,  
Susan Wang

---

***Susan Wang***  
***Institutional Research Analyst***  
***Office of Institutional Research***  
***Oregon State University***  
***Phone: 541-737-9183***  
***Email: Susan.Wang@orst.edu***

From: "SAUL,KEN (HP-Corvallis,ex1)" <ken.saul@hp.com>  
To: "Bruce D'Ambrosio" <dambrosi@cs.orst.edu>  
Subject: RE: CS project proposal

Bruce,

I have two projects in mind that the team could pick from (I am technically sponsoring one CS project and two EE projects).

1. A bore metrology project find edges of a circle on a magnified image of a printhead orifice layer and calculate diameter and circularity. Optimize for speed so measurement could be done on thousands of bores per hour.
2. A project on what I call Print Spot Memory -- essentially encoding binary data as tiny dots on paper. The data is read back via a scanner and software to locate the dot array and decode it back to binary data.

It would be great to have both projects done -- if there is a chance that both could be done, I could provide more \$\$\$. Please let me know what you think.

Thanks!  
Ken Saul



From: Charles Goodrich <goodrcha@onid.orst.edu>  
To: dambrosi@cs.orst.edu  
Cc: kmoore@orst.edu, anarres@peak.org  
Subject: Spring Creek Project: CS Senior Project proposal

Bruce,

The Spring Creek Project has an underfunctioning website. We'd very much appreciate some help making it more useful and interesting. We want to be able to change the text in it ourselves--to update events schedule, for instance. WE want people to be able to download applications for some of our workshops and events. And we would like to improve the visual appearance of all the screens. And there are no doubt other kinds of functions it could be doing. Would this make a good Senior Project?

We tried this with two students last spring, and did not get a good product, largely because the students were not very engaged, but partly because we did not give them adequate input. We are prepared to do that this time.

Let me know what further information I can supply. We appreciate this opportunity to benefit from the expertise of your students.

Thanks,

Charles Goodrich  
Spring Creek Project Instructor  
Department of Philosophy  
Oregon State University  
Corvallis, Oregon 97331  
541-737-6198

Subject: Computer science senior project  
From: "Uesugi, Sandra" <sandra.uesugi@orst.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hi Bruce,

My colleague suggested that I contact you regarding the RFP for CS senior projects. I am seeking an opportunity to find OSU students who can create two virtual lab tours for high school students to view either on the web or using a CD ROM. These virtual tours will be part of a greater website that will allow high school students to understand how toxic chemicals are studied, either in the human body or how these compounds move throughout the environment. I am currently working on two modules for the site: one for flow cytometry and one for gas chromatography. Students will learn how these instruments work, how they are used in environmental health science, then then will apply this knowledge to "solve" a health mystery. I am also including a component to highlight the research being conducted at OSU's Environmental Health Sciences Center, which is where the lab tours will fit into the website.

After reading the RFP, I wanted to check with you to determine if your course would be a good match for this project or if you think this would be a better fit for the multimedia course being taught by Mark Dinsmore. Will your students be creating a software program?

Thank you very much,  
Sandra

~~~~~  
Sandra Uesugi, Program Coordinator

Community Outreach and Education Program
Environmental Health Sciences Center
1011 ALS
Oregon State University
541-737-4374
~~~~~

Jeanne Silsby  
Director of External Relations  
College of Business  
200C Bexell Hall  
Corvallis, OR 97331-2603  
541-737-6020  
[www.bus.oregonstate.edu](http://www.bus.oregonstate.edu)

To: Bruce D'Ambrosio  
Associate Professor  
Computer Science  
Oregon State University  
541-737-5563  
dambrosi@cs.orst.edu

## **Computer Science Senior Project Proposals**

Contact: Jeanne Silsby, College of Business Dir. of External Relations, 737-6020

Contact: Tony Saxman, College of Business Dir. of Information Services, 737-4330

### *E-Commerce Module*

The College of Business recently updated its web site and would like to add an e-commerce feature to handle program registrations and selling of COB paraphernalia. The application would need to conform to OSU standards and leverage the .net platform to integrate with our current infrastructure. If interested, we have space available for students to use our development tools (C# or VB.net) and MS infrastructure (SQL, Win Server 2003), as well as a place for code storage and hosting (visualstudio.net). Guidance, if students aren't completely familiar with the tools, would also be provided if desired.

### *On-line Alumni Directory*

We would like to enhance the alumni section of the College of Business web site with a searchable alumni directory. We'd like alumni to be able to sort by year and major, and to have an interface to enter, update and view their information, as well as view others info. There would also need to be a feature so that updates were automatically forwarded to the OSU Foundation. The application would need to leverage the .net platform to integrate with our current infrastructure. If interested, we have space available for students to use our development tools (C# or VB.net) and MS infrastructure (SQL, Win Server 2003), as well as a place for code storage and hosting (visualstudio.net). Guidance, if students aren't completely familiar with the tools, would also be provided if desired.

### *Automated Resume Posting System*

We would like to develop a resume posting feature for students. This would enable students to cut and paste their resume info into an application and have it viewed via a

link on the web site. The application would also have a search feature so potential employers could sort by option, year and key words. An auto archive feature by school year would also be positive. The application would need to leverage the .net platform to integrate with our current infrastructure. If interested, we have space available for students to use our development tools (C# or VB.net) and MS infrastructure (SQL, Win Server 2003), as well as a place for code storage and hosting (visualstudio.net). Guidance, if students aren't completely familiar with the tools, would also be provided if desired.

#### *Automated Attendance Reader*

This application would enable students to scan their ID cards and dump their data into a database. Professors would be able to see who attended a particular class or seminar, on which date, etc. This application would be used during the College of Business Spring Seminar Series or Dean's Lecture Series when large numbers of students get credit for attending. This would enable faster tracking and less bottlenecking at the event. The application would need to interface with the card reader and leverage the .net platform to integrate with our current infrastructure. If interested, we have space available for students to use our development tools (C# or VB.net) and MS infrastructure (SQL, Win Server 2003), as well as a place for code storage and hosting (visualstudio.net). Guidance, if students aren't completely familiar with the tools, would also be provided if desired.

#### *Discussion Group Module*

This application would enable students to share discussions on-line within the College of Business web site instead of going to something like Yahoo. This would involve setting up registration, an authentication system, and developing the application. If interested, we have space available for students to use our development tools (C# or VB.net) and MS infrastructure (SQL, Win Server 2003), as well as a place for code storage and hosting (visualstudio.net). Guidance, if students aren't completely familiar with the tools, would also be provided if desired.

## Senior Project Proposal

The Office of Sponsored Programs and Research Compliance is responsible for reviewing grant proposals that are submitted by the OSU faculty to federal, state, and private agencies/foundations. Overall at OSU, external support for our faculty research and scholarship activities is in excess of \$124 million. Within this total, there are five federal agencies that amount for the majority of funds: National Science Foundation, U.S. Department of Agriculture, National Institutes of Health, National Aeronautics Space Administration, and Department of Energy amounted to over 75 million last year. These dollars were in support of faculty activities across most OSU colleges and departments.

Preparing a proposal for external funding requires substantive effort. While the proposal narrative must necessarily be driven by the faculty involved in the project, there are some tools that could simplify and facilitate the creation of the proposal budget. Budgets all contain some similar information and often contain very similar problems that require correction. While the different sponsors have different budget forms that must be used with the proposal, core budget information could feed into those forms.

What we are looking for is help in developing the following:

- A user-friendly, budget spreadsheet template that will be downloadable from our website and have the following features:
  - ❖ Must have the ability to expire. Because changes periodically occur with various university rates, we want the spreadsheet to automatically expire after a certain number of weeks so the user is forced to download the most current version. We have a prototype from Colorado State University, but have been unable to decode the macro used for the expire feature.
  - ❖ Must be able to add years. The spreadsheet must be able to simply calculate out into up to five future years and the formulas and other formatting need to be able to transfer into new year.
  - ❖ Step by Step instructions. Our faculty investigators have varying degrees of sophistication of familiarity with working with a spreadsheet. These instructions **must** be written at a basic user level.
- We would like this spreadsheet to be able to “fold” into the specific budget forms of our top five federal agencies (listed earlier).

### **Contact Information:**

Eric Anundson  
Grant Proposal Specialist

Peggy S. Lowry  
Director  
Office of Sponsored Programs and Research Compliance  
(541) 737-3437

From: Dennis Garity <garity@math.oregonstate.edu>  
To: dambrosi@cs.orst.edu  
Subject: Fwd: RFP: Computer Science senior projects course

I don't know if it is too late for this, but here is a potential project.  
I run a summer research program for undergraduates in mathematics  
and C.S. (with Paul Cull).  
I would like to get the application process completely online.

It is now partially online. Each student needs to submit an application,  
2 separate statements that include mathematical notation, and letters of  
recommendation. Ways to incorporate the notation in online form and  
to verify the recommendation letter senders identity would be useful.  
If this sounds like something you could let use, let me know.  
I leave January 15 for Europe, but will be in touch via internet for the time I  
am away.

--

Dennis Garity  
Mathematics Department  
Oregon State University  
Corvallis, OR 97331  
+1 541 737 5138  
garity at math dot oregonstate dot edu

Hello Bruce:

Here's our quick proposal. We're very interested in meeting with a group of senior students to discuss the project and build a detailed spec of what is needed. Let me know if a group is interested and when they're available Winter term.

Proposal for Senior Project  
OSU Extended Campus Design & Production Team

[http://oregonstate.edu/~vanlondp/senior\\_project/](http://oregonstate.edu/~vanlondp/senior_project/)

Critical Thinking Scenario Tool

We propose to develop an online tool that provides an interface and database for faculty to construct a critical thinking model, simulation, environment, etc. The resulting dataset and dynamic user interface allows students to make choices and see the consequences for a problem or scenario. The system will be flexible enough to allow content input about any subject for learning concepts, skills training, and competency testing. The two parts include:

Build (instructor input)

- \* Statement of the problem=20
- \* Organization of the outcomes=20
- \* Visual map of the components/choices/steps to get to the outcomes=20
- \* Modification of input, including=20
- \* Adding the critical paths to desired outcomes (visually ties one choice to another)=20
- \* Adding instructor feedback to students (written and visual)=20
- \* Content management system (CMS) to edit instructor input

Use (student input)

- \* Read instructions=20
- \* Input data=20
- \* Track progress and outcomes=20
- \* Report outcomes to self and instructor=20
- \* Read instructor feedback (auto generated based on instructor build)=20
- \* Reflection space for documenting what was learned

Detailed specifications will be available.=20

This [http://oregonstate.edu/~vanlondp/senior\\_project/diagram.htm](http://oregonstate.edu/~vanlondp/senior_project/diagram.htm) diagram illustrates or initial thoughts on the project.

We look forward to working with you and your seniors, Bruce.

Best wishes,

Pam Van Londen

Project Manager, Course Development

OSU Extended Campus | Oregon State University  
4943 The Valley Library | Corvallis, Oregon 97330  
541-737-9095 | <<mailto:pam.vanlonden@oregonstate.edu>> =  
pam.vanlonden@oregonstate.edu | =  
<<http://faculty.ecampus.oregonstate.edu>> faculty.ecampus.oregonstate.edu



From: "Hoisington, Anne" <anne.hoisington@oregonstate.edu>

Hi Bruce,

Here is our proposal. Please let me know if you need anything else for your consideration of the project. Thanks very much.

Oregon State University Extension Service - Oregon Family Nutrition Program (OFNP) is a federally funded nutrition education program reaching low-income families in Oregon. OFNP is in partnership with Oregon Food Bank to reach families within the emergency food network (pantries, shelters, hot meal sites). Emergency food use has been on the rise for several years in Oregon and other states. Oregon is among the hungriest states in the U.S. One method of reaching emergency food users with nutrition education is to provide recipes with food boxes. OSU Extension has developed hundreds of recipes using unusual, bulk, commodity, gleaned, and/or affordable foods. We are interested in developing a website where Regional Food Banks ("RFBs" - 20 sub-agencies to Oregon Food Bank) can access recipes that match foods that are going out to Local Participating Agencies ("LPAs" - the 800 + pantries and hot meal sites that directly serve the clients). Many LPAs do not have internet access - many are located in church basements - however, all of the RFBs are internet-ready.

Senior Project Proposal:

## **Web-Based Input, Search and Results Interfaces for the Bibliotherapy Project**

OSU Libraries

Principal Investigators: Paula McMillen and Dale Pehrsson

CS Advisor: Jon Herlocker

The Bibliotherapy research project, housed on the OSU Libraries' server, is looking for one or more students to design, refine, implement, evaluate, and deploy web-based interfaces for entering form-based information (categorical & free text) and for providing easy to use search and results interfaces to the resulting **database of books evaluations**.

The Bibliotherapy Project emerged from the question, "How do practitioners choose therapeutic literature and how do they know what to look for in a book?" This research question led to the development of the Bibliotherapy Evaluation Tool (BET), a paper-based **questionnaire** that was guided by an extensive review of the mental health and education literature. The Bibliotherapy **Project is in the process of transferring the** BET to the web, enabling greater access and taking advantage of information search technologies. The result **will** be a highly-accessible tool **that practitioners can use to formally evaluate books for use in therapy. These evaluations will be stored in a web accessible database that is searchable on a number of criteria. The goal is to have a continually growing, easily searchable database** with potentially significant value to counselors, **teachers** and other **helping professionals**.

The basic needs at this point are to complete the move of the BET to a web-based format, refine the underlying database structure for capturing the entered information, and providing basic search capabilities for the database. This functionality is to be completed in Winter quarter. Subsequent to initial deployment, user testing is expected to be part of refining the search interfaces and results displays.

The possibilities for enhancing the functionality of the BET database and the project website are numerous and the project team is open to working with students' interests. Some possibilities include (but are not limited to):

- Helping to ensure a "clean" database by automatically searching a separate, web-based library catalog to capture authority records once an evaluator begins entering information describing a particular book.
- Providing dynamic links within retrieved book evaluations that would tell the patron if a book was available at their local library(ies) or available for purchase through a nearby (geographically) bookstore.
- Developing a dynamically generated report and/or display of site users' demographic information (using information captured via a registration page). This in particular would support some of our research goals for the project.
- Providing a means to analyze the type of evaluations entered based upon categorical data; again, this would support our current research goals for this project, specifically, to determine what kinds of child & adolescent literature are currently being used.
- Ensuring that all pieces of the Bibliotherapy project web site are ADA compliant (i.e., accessible to readers, etc.)

- Dynamic links in the search result records that would take readers to additional books by a certain author or illustrator or about particular subject themes, etc.
- Alternative interfaces to the database for different user groups, e.g., a different display and search interface for children under a certain age (based on user registration information)

The project would **minimally** entail the following steps:

1. **Continue to refine** a database schema to store information recorded from BET forms.
2. **Continue to refine the** web-based entry interfaces that store the information in a relational database.
3. **Continue to refine a web-based interface for capturing site user information**
4. Design a variety of alternative intuitive search interfaces **for the BET database**
5. Develop ranking algorithms to effectively order search results
6. Design a variety of alternative interfaces for displaying search results
7. Perform user testing to validate the usability of the implemented interfaces
8. Ensure that search and browsing performance is acceptable.
9. Deploy the system to the world!

Additional project parameters are open to negotiation with the Bibliotherapy project team, the CS student(s) and the senior project advisor. The Bibliotherapy project team is available to answer questions about the project:

Paula McMillen (principal investigator): [paula.mcmillen@oregonstate.edu](mailto:paula.mcmillen@oregonstate.edu)

Dale Pehrsson (principal investigator): [dale.Pehrsson@oregonstate.edu](mailto:dale.Pehrsson@oregonstate.edu)

Matthew Gonzales (Library Technology liaison):

[matthew.Gonzales@oregonstate.edu](mailto:matthew.Gonzales@oregonstate.edu)

Anne-Marie Deitering (Library intern): [anne-marie.deitering@oregonstate.edu](mailto:anne-marie.deitering@oregonstate.edu)

Subject: Computer Science Student Projects.....  
From: "Nauman, Diane" <diane.nauman@oregonstate.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Hello, Bruce-

Do you still need potential projects for your computer science students? I could use assistance in the development and application of the College of Pharmacy's Early Experiential Program management/administrative tools onto "Blackboard" (i.e. rotation site catalog of 150+ community based sites, online student site selection forms, programming of a "matcher" to randomly assign students to sites, site placement notification to students, site assessment questionnaires, assignments, etc.)

I had originally developed a Cold Fusion/Access program with David Conrad a few years ago, but our Dean has elected not to continue to fund the "updates" needed annually with David (now graduated and employed by Xerox) to keep this program updated and "on the web" ..so I have had to resort to a manual system again. :-(

Blackboard appears to be a system that the university will continue to support, so if I try to get the system on the web again, I will use it.

Please let me know if your students might be available to help me. Thank you very much!

Sincerely,

Diane M. Nauman, R.Ph.  
Director of Early Experiential Education  
Oregon State University  
College of Pharmacy  
328A Pharmacy Building  
Corvallis, OR 97331-5307  
(541) 737-8411  
Fax: (541) 737-3999  
Email: Diane.Nauman@oregonstate.edu

Subject: FW: Computer Science senior projects course  
From: "Clawson, Jeff" <Jeff.Clawson@orst.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Bruce,

Are you still looking for project suggestions? We have a great opportunity here in our pilot scale brewery. We are in the process of hooking up: data acquisition hardware to the brewhouse, developing programs within Labview (data acquisition and process control software), communications through our server via a wireless hub, and eventually developing a web site for monitoring process flow off site.

There is plenty of work here to consume two quarters and the project is not so difficult that success is allusive.

If any of this sounds like interesting, drop me a note and we can go into more detail. I'd be working closely with the students as this is my baby.

Jeff

Subject: Proposal: Computer Science senior projects course  
From: "Brown, Norm" <Norm.Brown@oregonstate.edu>  
To: "D'Ambrosio, Bruce" <dambrosi@cs.orst.edu>

Bruce,

I would like to submit the following proposal for your consideration:

Project: Assess irrigation efficiency; assess and predict water usage.

Design a program that will correlate water usage and efficiency for campus irrigation applications.

This will require extraction and relating data from several sources including the OSU campus irrigation control program with water usage data from city meter readings.

Data for water used comes from City meter readings and converted using MS Excel.

Data for Water used by plants and lost to evaporation (Net evapotranspiration) comes from a local weather station and can be exported in MS Access format

Data for Sq footage of area covered may come from either AutoCAD maps of individual irrigation system or from Arc view GIS campus maps.

The Program to be developed will import the necessary data, convert water units to gallons, determine how many square feet are covered for each water meter area, calculate inches of water applied, and compare to ET.

I will be available to attend a class meeting in January to discuss this project and to attend follow up meetings with the project team as necessary to assist in the program development.

This program will very beneficial to the university and the community in helping to improve the efficiency of our water resource use.

It also provides a real world environmental challenge for which skilled programmers can provide valuable solutions.

I look forward to discussing this with you,  
Please feel free to contact me with any questions you may have,

Norm Brown  
Facilities Services Landscape Management  
Oregon State University  
100 Adams Hall  
Corvallis, OR 97331-2001

Norm.Brown@orst.edu  
Phone (541) 737-7639

## RESEARCH PROPOSAL

From: Dr. Ulrich Orth, OSU College of Business, Consumer Behavior and Psychology  
Dr. Ronald Metoyer, OSU College of Engineering, Computer Science

Title: **Developing efficient 3-D internet stores with desktop virtual reality**

Background:

This proposal suggests to examine how virtual stores (accessible through the internet or CD) need to be designed for influencing buyer (purchase) behavior most favorably. The project includes the development and empirical evaluation of a model based on past research on consumer behavior and environmental psychology in real stores.

Although the importance of the WWW as a marketing tool is growing rapidly, consumer needs and wants are still somewhat neglected. As a result, (not only) wineries report small percentages of sales online. Technical aspects dominate the conceptual development of internet shops and consumer behavioral and psychological aspects find little consideration. In particular, factors that make internet shopping a stimulating and fun experience remain largely unknown. While brick and mortar retailers have identified and make use of the large potential of hedonic shopping experiences, existing internet shops completely disregard this perspective. The research proposed here focuses on how to make visiting virtual wine stores a most stimulating and pleasing experience that leads to actual sales. At present, only very few three dimensional stores exist online.

Generating knowledge about this type of outlets will thus provide most valuable insights for innovative marketers. Past research identified a number of variables suitable for creating (emotionally) stimulating retail environments. Most prominent among those are lighting (brightness, highlights), colors, decoration, and background music.

Others include information options (retrieval of acoustic and visual information) and interactive features (e.g. the option for visitors to move through the store, to choose a body, to meet each other, salespeople interaction, and participation in store design).

Objectives:

"\_ To identify what and how store characteristics affect consumer cognition, affect, store and product evaluation, and finally purchase behavior.

"\_ To determine the interaction effects between consumer characteristics and store characteristics in the relations described above.

"\_ To establish guidelines for developing efficient 3-D stores with desktop virtual reality.

Methodology:

Object of the study is a 3-D store with desktop virtual reality (i.e. a virtual winery with tasting room, cellar, and vineyard). An experiment will be designed to study a consumer sample of approximately 300 respondents. The sample will be split in several cells, each cell corresponding to one type of store manipulation. Manipulation variables include color, decoration, music, lighting, salespeople, background, and visitor movement. Incentives will be offered to consumers (50% male, 50% female) to visit one store manipulation and to complete a questionnaire on independent (optimum stimulation level, lifestyle, product category involvement) and dependent variables (information rate, ease of orientation, arousal, pleasure, store perception, product quality perception, purchase intention). Data will be analyzed using a structural equations modeling approach (AMOS4.0). Appropriate store characteristics manipulations will be determined in a series of pretests prior to data collection.

Outcomes:

Results from this project will lead to a greater understanding of how store characteristics affect consumer stimulation and buying behavior. Specifically, this project will result in:

- "\_ A quantitative model linking virtual store characteristics to consumer behavior.
- "\_ An identification of efficient store characteristics.
- "\_ An identification of consumer differences in the relationships described above.
- "\_ An identification of store-consumer match-ups that sell.
- "\_ A fully functional 3D store with desktop virtual reality.



To: dambrosi@cs.orst.edu  
From: John Fowler <fowlerj@science.oregonstate.edu>  
Subject: Re: RFP: Computer Science senior projects course

Hi Dr. D'Ambrosio,

This may be too late to get into your Capstone program, but I wanted to give it a try. My paragraph is below.

Proposal: PollenGDb: A Web-Accessible Database for Integrating Bioinformatic Data on Pollen Genes in Crop Species

PI: John Fowler, Assistant Professor, Botany and Plant Pathology Dept.

To assist in an ongoing NSF-funded project investigating the genetic and molecular bases pollen development and fertilization in maize (corn), rice and other crop species, I propose to collaborate with the CS Capstone class to build a web-accessible database on the CGRB (Center for Gene Research and Biotechnology) server. Initially, the database will serve as an 'electronic notebook' of sorts, summarizing and recording raw bioinformatic analyses of maize and rice gene sequences from a number of investigators, on- and off-campus, and will be a first step in investigating several hypotheses regarding gene function in pollen. As the database matures, it will incorporate additional automated tools for bioinformatic analysis. The database will consist of three parts: 1) a MySQL database, containing the analyses mentioned above, with summarized conclusions from these analyses linked to specific, predicted genes; 2) a web-browsable interface that allows scientists throughout the world easy access to the information in the database; and 3) a password-protected, web-browsable input interface that is menu- and button-driven, such that investigators have a standard, controlled method for adding information to the database. The database will also serve as a focal point for an outreach project to Portland High Schools through the OSU Science Connections program, which will allow high school students to learn about, and participate in, bioinformatics research.

thanks for considering this late suggestion!  
John