FORREST CORCORAN

fpcorcoran17@gmail.com | 860-970-8927 | 33 Lake Dr. N, New Fairfield, CT 06812

EDUCATION

Oregon State University **Corvallis, OR**
Ph.D. Civil and Construction Engineering (Geomatics) – Minors: Artificial Intelligence, Mathematics Present
- Research: *Studies of ICESat-2 spaceborne lidar for bathymetry, benthic habitat mapping, and coastal engineering.*

University of Pennsylvania **Philadelphia, PA**
M.S. Applied Geosciences (Engineering Geology) – Minor: GIS & Spatial Analysis May 2019
- Thesis: *Landslide Susceptibility and Risk Analysis of Pierce County Washington using GIS based Artificial Neural Networks and K-Means Clustering*

Colorado College **Colorado Springs, CO**
Bachelors in Geology May 2017
- Thesis: *Exploring the Use of Geophysical Methods to Identify and Characterize the Geometry and Movement of Slope Failures in Regions of High Landslide Susceptibility*

EXPERIENCE

Descartes Labs **Santa Fe, NM - Remote**
Summer Applied Scientist July 2021 – September 2021
- Developed remote sensing (InSAR and hyperspectral) software tools for Mining Exploration & Safety team.

Weyerhaeuser Company **Seattle, WA - Remote (COVID-19)**
Remote Sensing Intern June 2020 – August 2020
- Utilized remote sensing techniques for forest ecology and species mapping in support of the silviculture and harvesting team as well as freshwater habitat mapping of salmon in the Pacific Northwest in support of the environmental impact team.

University of Pennsylvania - Kleinman Center for Energy Policy **Philadelphia - Remote**
US Coastal Fossil Fuel Flow GIS Researcher & Web Developer January 2019 – June 2020
- Developed web applications for data visualization and analysis of US petroleum imports.

National Aeronautics and Space Administration (NASA) – Jet Propulsion Lab **Pasadena, CA**
DEVELOP Researcher – Team Lead January 2020 – April 2020
- Evaluated the use of InSAR and GRACE data to deliver actionable groundwater information for local government policy implementation in California. (Published)

National Aeronautics and Space Administration (NASA) – CSU Natural Resources Ecology Laboratory **Fort Collins, CO**
DEVELOP Researcher – Team Data Manager September 2019 – November 2019
- Applied machine learning and remote sensing techniques to map invasive grass species (cheatgrass) distribution across Medicine Bow National Forest.

Pierce County Planning and Land Services **Pierce County, WA**
Landslide Hazard Mapping Intern June 2018 – August 2018
- Managed and improved Pierce County's landslide hazard database. Dramatically reduced "red tape" in property development by automating removal of erroneous landslide hazard markers throughout the county database.

Colorado College **Arizona**
Student Researcher Fall 2017
- Used a combination of GIS and geophysical techniques to assess landslide susceptibility across Arizona.

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Colorado College/US Air Force Academy **Colorado Springs, CO**
Student Researcher Summer 2015

- Used geophysical techniques to model the depth to groundwater in preparation for a geothermal heating/cooling system on the US Air Force Academy's campus.

TECHNICAL SKILLS

Software	Git, Docker, Vagrant, Google Earth Engine, Panoply, MS Office, ArcGIS, QGIS,
Programming	Python, C++, SQL, Javascript, Bash, Matlab, PHP, HTML, CSS

PROFESSIONAL ORGANIZATIONS

American Society of Photogrammetry and Remote Sensing (ASPRS) **Current**
Oregon State University Student Chapter – Treasurer

PUBLICATIONS

1. Corcoran, F., & Parrish, C.E. (2022). DORSL-FIN: A Self-Supervised Neural Network for Recovering Missing Bathymetry from ICESat-2. *MDPI Remote Sensing,* [In Review]

2. F. Luhrmann, J. Park, W.-K. Wong, F. Corcoran, & C. Lewis (2022) Detecting Traveling Ionospheric Disturbances with LSTM Based Anomaly Detection. *35th International Technical Meeting of the Satellite Division of The Institute of Navigation*, Denver, Colorado, pp. 3002-3011. https://doi.org/10.33012/2022.18343.

3. Corcoran, F., & Parrish, C. E. (2021). Diffuse Attenuation Coefficient (K_d) from *ICESat-2* ATLAS Spaceborne Lidar Using Random-Forest Regression. *Photogrammetric Engineering & Remote Sensing*, *87*(11), 831–840. https://doi.org/10.14358/PERS.21-00013R2

4. Corcoran, F., Dudek, M., Kitchens, J., & Saylor, P. (2020). Central Valley Water Resources: Improving California Groundwater Assessments using GRACE and InSAR Datasets for Water Resource Management. *NASA Technical Report.* https://ntrs.nasa.gov/citations/20205000952

5. Kim, K. H., Liu, Z., Rodell, M., Beaudoing, H., Massoud, E., Kitchens, J., Dudek, M., Saylor, P., Corcoran, F., & Reager, J. T. (2021). An Evaluation of Remotely Sensed and In Situ Data Sufficiency for SGMA-Scale Groundwater Studies in the Central Valley, California. *JAWRA Journal of the American Water Resources Association*. https://doi.org/10.1111/1752-1688.12898

6. Herrmann, J., Parrish, C. E., Magruder, L. A., Simurda, C., Markel, J., & Corcoran, F. (2021, December). Leveraging Icesat-2 and Multispectral Imagery to Detect Bathymetric Change due to Hurricanes in the Northern Gulf of Mexico. In *AGU Fall Meeting 2021*. AGU. 2021AGUFM.G54A..05H

LINKS

LinkedIn: https://www.linkedin.com/in/forrestcorcoran/

Github: https://github.com/fpcorcoran

Personal: http://web.engr.oregonstate.edu/~corcoraf/index.html

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