Support for learning while debugging in a distributed visual programming language

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Abstract—The LondonTube environment includes a visual programming language to ease creation of apps distributed at runtime over mobile devices, browsers and the cloud. However, a typical programmer still learning the language would struggle with debugging a program of realistic size, in large part due to the difficulty of finding and understanding bugs. We have implemented an IDE plugin aimed at showing where in the code the computation breaks down and helping the programmer to understand why that code might not be working. In a between-subjects experiment, novice LondonTube users with these new features asked fewer questions about the language than those without, and they gave the enhanced environment higher usability ratings.

For the complete paper, refer to the IEEE website.