Dear Dr. Chang, Dr. Reisman, and Dr. Tovar,

Enclosed you will find our paper, "Implementing an Open-access, Data Science Programming Environment for Learners", for consideration in the May special issue of IEEE Computer magazine on Learning Technologies. This paper represents a major ongoing research and development project to create a modern, web-based introductory programming for beginners named BlockPy. This system has a number of innovative features, including dual block/text code editing, interactive guided feedback, and powerful data science tools. In this paper, we not only describe the features of the tool but also share preliminary data from a pilot demonstrating the success of the tool in a real classroom environment.

We feel that this paper is an excellent fit for the special issue on Learning Technologies. A fundamental vision for BlockPy is an open-access, online programming environment for all kinds of learners, suitable for both formal and informal learning experiences. The data science context afforded by the environment makes it particularly suitable for interdisciplinary learning. Finally, the system provides a mechanism for collecting intriguing new learning analytics that can guide development of both the technology and instruction.

This paper is based off of our IEEE COMPSAC'16 paper of the same name. In preparation for submission to IEEE Computer, that COMPSAC paper has been changed to be an abstract only. To further differentiate the two papers, we have made a number of changes to our paper. First, features descriptions and screenshots have been updated with new details to represent the improvements made after our original submission. Second, a number of sections have been edited for brevity and to make the content more accessible to a wider audience. This includes removing a number of figures and combining others.

We look forward to your reviews of our paper, and appreciate your time. Please let us know if any changes are needed for our submission.

<div align="right">
Sincerely,
Austin Cory Bart
Javier Tibau
Eli Tilevich
Clifford A. Shaffer
Dennis Kafura
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