

Bringing Real-World Data, Interactive Games and Visualizations into Early CS Courses

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This workshop provides instructors with a hands-on introduction to BRIDGES, a software infrastructure for programming assignments in early computer science courses, including introductory programming (CS1, CS2), data structures, and algorithm analysis. BRIDGES provides capabilities for creating more engaging programming assignments, including: (1) a simplified API for accessing real-world data sets, including from social networks; scientific, government, and civic organizations; and movie, music, and literature collections; (2) interesting visualizations of the data, (3) an easy to use API that supports creation of games that leverage real-world data, and, (4) algorithm benchmarking. Workshop attendees will engage in hands-on experience with BRIDGES with multiple datasets and will have the opportunity to discuss how BRIDGES can be used in their own courses.

Keywords: data structures; algorithm analysis; interactive games; visualization; real-world data;

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