

Computing Education with a Cause

A Position Paper for the First International Workshop on Software Research and Climate Change

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Abstract

As the issue of climate change grows to greater levels of concern, we need effective ways at increasing awareness of the health problems linked to climate change, increasing the likelihood of people to adopt practices that help alleviate, not contribute to, the problem, and making better systems to leverage the data being collected by many agencies. We are interested in exploring ways computing schools can collaborate with industry to offer tools and expertise that will support initiatives by agencies such as the Centers for Disease Control and Prevention [1] toward improving health outcomes related to climate change.

Categories and Subject Descriptors K.4.0 [Computers and Society - General]

Keywords climate change; computing education

1. Involving Computing Schools toward a Solution

The challenge from the First International Workshop on Software Research and Climate Change is how we can contribute to the issues of climate change [3]. From an educational institution standpoint, we can contribute by providing partnerships with other communities, e.g. the K-12 and local healthcare systems, teaching students skills that will be needed for effective problem solving and collaboration, and giving students the opportunity to explore solutions to some of the challenges in an interdisciplinary environment.

1.1 Making Community Connections through Capstone Courses

We feel students should be key participants in developing solutions to the climate change issue. In a higher education setting, we can easily provide opportunities for students to get involved in this complex problem-solving activity. A goal recently empha-

sized at our institution is to promote undergraduate and graduate research and experiences that have a community-based emphasis [4]. These experiences connect the students to the ‘real world’ and are considered richer and more transformative. Students are likely to find an issue like health concerns and climate change very relevant and motivating.

Our computing curricula for computer science, information systems, and information technology all include some type of capstone experience involving analysis and design, so we are well-positioned to use these courses as possible ‘think tanks’ for solutions that involve other disciplines on campus (e.g. education, health science, environmental science). Possible outcomes of such projects for these students could be prevention programs for clients such as children and young adults (modeled after Campaign for Tobacco-Free Kids [2]) or systems that support initiatives by community health organizations to meet Centers for Disease Control and Prevention priorities such as forecasting health effects of local climate change. Other projects that are inter-institutional are desired also.

References

- [1] Catford, J. (2008) Food security, climate change and health promotion: opening up the streams not just helping out down stream. *Health Promotion International* 23, 2, 105-108.
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