Steven Dang

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RESEARCH INTERESTS

Overview:

I am interested in investigating how creative and design skill develop in young children especially in problem solving contexts and how computational technologies can be leveraged to support their learning. I am also interested in how intelligent algorithms and crowd-sourcing methods can be adapted to develop, validate, and assess student learning materials and outputs.

Keywords:

creativity, Problem solving, design-thinking, machine learning, crowd-sourcing, learner-sourcing, educational data-mining, automated-assessment, learning analytics, intelligent tutoring systems, artificial intelligence, human computer interaction, developmental psychology, cognitive psychology

EDUCATION

Carnegie Mellon University

Masters in Educational Technology and Applied Learning Science   **August 2015**

Georgia Institute of Technology

BS in Electrical Engineering   **May 2007**

TEACHING EXPERIENCE

Creative Computing   **Fall 2014**

Remake Learning Digital Corps, Milliones 6-12 University Preparatory School, Instructor

Mobile Services Innovation   **Spring 2014**

School of Computer Science, Carnegie Mellon University, Teaching Assistant

Robotics Technology Enrichment Seminar Series for US FIRST Teams   **Fall 2003 – Fall 2007**

Georgia Tech Robojackets, Instructor

Introduction to Engineering with Robotics   **Summer 2004 – Summer 2005**

Summer Scholars Program, University of New Orleans, Instructor

PUBLICATIONS, POSTERS, & DEMONSTRATIONS

Chan, J., Dang, S., & Dow, S. P. Making electronic brainstorming more social. ACM Conference on Computer Human Interaction (CHI '15). *(Pending Review)*   **2015**

MacClellan, C., Dang, S., Koedinger, K., Dow, S. *Speed Matters More than Abstractness for Capturing Creative Ideas*. ACM Conference on Computer Human Interaction (CHI'15). *(Pending Review)*   **2015**

Chan, J., Dang, S., Kremer, P., Guo, L., & Dow, S. *IdeaGens: A social ideation system for guided crowd brainstorming.* Demonstration at the 2nd AAAI Conference on Human Computation and Crowdsourcing.   **2014**

RELATED EXPERIENCE

Carnegie Mellon University: Protolab

Graduate Research Assistant   **July 2013 – Present**

Designed and ran experiments investigating group creativity.

Developed a node-javascript platform for investigation group brainstorming

University of Maryland: Institute for Advanced Computer Studies

Research Programmer   **August 2012 – May 2013**

Created Python Library to support large-scale open scene image preprocessing for OCR

Lockheed Martin

Software Engineer Lead   **August 2007 – March 2011**

Enterprise architecture design for mobile devices for use in tactical theater

iOS app suite development for soldier-as-a-crowd intelligence collection & distributed decision-making

Dismounted Combat Helmet-mounted augmented reality embedded system design

Enterprise geospatial intelligences services for video and image processing

NASA Ames: Intelligent Robotics Group
Robotics Intern Team Lead   **Summer 2007**
Characterized visual sensor performance & developed automated multi-sensor calibration algorithm

SKILLS
Relevant Coursework:
Educational Goals, Instruction, & Assessment, E-Learning Design, Interaction Design Overview, Cognitive Development, Independent Study in Children's Scientific Inquiry, Experimental design for behavioral and social sciences, Non-convex optimization, Neural Nets & Fuzzy Logic, Automation & Robotics Control, Hybrid & Embedded Control Systems, Computer Vision, Computer Architectures and Operating Systems

Programming Languages:
Javascript,, Python, Ruby, HTML5, CSS3, SQL, Java, Objective C, C

Software Libraries:
Jquery, JqueryUI, Bootstrap, D3js, Handlebars, Angular, Express, Meteor, SqlAlchemy, Celery, Numpy, Scipy, Django-Rest

Technologies:
Node, Django, Rails, Apache Web Server, MySQL, MongoDB, Oracle ESB, Linux

AWARDS
Lockheed Martin Special Recognition Award   **December 2008**
Georgia Institute of Technology President's Scholar   **August 2003 – May 2007**

MEMBERSHIPS & SERVICE
Pittsburgh Science of Learning Center, Executive Committee Graduate Student Representative   **August 2014 – Present**
Pittsburgh Science of Learning Center, Graduate Student Organization President   **August 2014 – Present**
Institute for Electrical and Electronic Engineering (IEEE)   **2007 – Present**
Association for Computing Machinery (ACM)   **2014 – Present**
Association for the Advancement of Artificial Intelligence (AAAI)   **2014 – Present**