Christopher Mar
2505 E Williams Field Road, Apt 2023
Gilbert AZ 85295
(520) 784-4658
cmar2@asu.edu

Education

Arizona State University Polytechnic, Mesa, Arizona
M.S. in Software Engineering, 2016
Thesis Title: The Effect of Embedded Questions in Programming Education Videos
Advisor: Dr. Sohum Sohoni

University of Colorado, Boulder, Colorado
B.S. in Electrical and Computer Engineering, 2013

Appointments

Arizona State University, School of Computing, Informatics, and Decision Systems Engineering, Mesa, Arizona
Faculty Associate, Software Engineering, 2017-present
Graduate Teaching Assistant, Software Engineering, 2015-2016

- Courses taught include computer microarchitecture and digital logic design.
- Applied teaching techniques evaluated in master's thesis to course lectures.
- Revised course projects to improve alignment to course objectives and streamline grading process.
- Created supplemental instructional videos reviewing course content.

Awards

2016 – Best Paper Award – ASEE Pacific Southwest Conference for "Comparing Cooperative Learning in Online and In-Person Versions of a Microprocessors Course"
2015 – Outstanding Software Engineering Teaching Assistant Award – Arizona State University, The School of Computing, Informatics, and Decision Systems Engineering

Professional Affiliations

IEEE
Member, 2017-present

Research Areas

STEM Education:
Multimedia Learning, Testing Effect, and Collaborative Learning
Embedded Systems

Publications

Mar, C., Sohoni, S., Craig, S. D. (in press). The effect of embedding questions in programming education. In *Frontiers in Education Conference (FIE), 2017 IEEE* (pp. xxx-xxx). IEEE

Bruchok, C., **Mar, C.**, & Craig, S. D. (2017). Is free recall active: The testing effect through the ICAP lens. *Journal of Interactive Learning Research*, *28*(2), 127-148.

Sohoni, S., **Mar, C.**, & Craig, S. D. (2016). Comparing cooperative learning in online and in-person versions of a microprocessors course. In *Proceedings of the 2016 American Society for Engineering Education Pacific Southwest Section Conference* (pp. xxx-xxx). Washington, DC: American Society for Engineering Education.

Projects

Rocket Engine Control and Data Acquisition System, Summer 2014 to Spring 2015

- Collaborated with an interdisciplinary team to determine requirements and implemented a system to meet requirements.
- Evaluated and presented options for available microcontrollers and communication protocols.
- System operated using a laptop from a safe distance via a web browser served by the Arduino. A RESTful API and AJAX were used to update the interface.
- Arduino Yún controlled power to the solenoids and igniter and collected data from pressure and thrust sensors.
- Managed source code version control using Git. Repository available at: https://github.com/mar8919/Arduino_DAQ

CPU Multi-Level Cache Simulator, Computer Organization, Fall 2011

- Implemented a two-level cache simulator in C++. Associativity and cache size were configurable at runtime.
- Trace file containing a list of CPU instructions were read by the program to simulate how they would be handled by the caches.
- Performance of caches with varying size and associativity were compared for tradeoffs in speed and cost.