
EXPERIENCE

U.S. Army Research Laboratory – U.S. Army’s corporate research laboratory Aberdeen, MD

Computer Scientist

www.arl.army.mil

Aug 2012–Present

- Developing a battlefield computation network composed of soldier-carried smartphones and High-Performance Computers (HPCs) mounted on Humvees and Unmanned Aerial Vehicles.
- Collaborating with Prof. Radu Stoleru of Texas A&M University to incorporate security and reliability to the battlefield network and with Profs. Ellen Zegura and Mostafa Ammar of Georgia Institute of Technology to develop computational ferries to enable computation offloading from hand-held devices in battlefields.

University of Virginia – America’s 2nd best public university

Charlottesville, VA

Graduate Research Assistant

www.virginia.edu

May 2006–Aug 2012

- Under the guidance of Prof. Kamin Whitehouse, lead **two research projects** which resulted in **six conference publications** [ICCPS ’13, IGCC ’12, SenSys ’08 – ’11] (three as the lead author), **and three journal articles** [SUSCOM ’13, SIGBED Rev. ’12, IEEE Des. Test ’12] (one as the lead author) in top Computer Science conferences and journals. Helped writing grants and advising students.
- Collaborated with Prof. John Stankovic’s Environmental Wireless Sensor Network group to implement a system to monitor sunlight under shrub thickets, resulting in a **conference publication** [SenSys ’07].

EDUCATION

University of Virginia

Charlottesville, VA

Ph.D. in Computer Science, August 2012. GPA: 3.5

M.S. in Computer Science, December 2009. GPA: 3.6

- Advisor: Kamin Whitehouse
- Ph.D. Dissertation: *Application Development for Cyber-Physical Systems: Programming Language Concepts and Case Studies*
- Master’s Thesis: *The Design of MDB: A Macrodebugger for Wireless Embedded Networks*

Vanderbilt University

Nashville, TN

B.E. in Computer Engineering with Minor in Mathematics, May 2006. GPA: 3.8. *Summa cum Laude*

- Undergraduate Coursework: Operating Systems; Algorithms; Programming Languages; Computer Architecture; Special Topics in Software Design; Embedded Systems; FPGA Design

TECHNICAL EXPERIENCE

- **Occupancy-based Thermostat Controller** (2009 – 2013). Cyber-Physical System (CPS) that reduced the heating and cooling costs of homes by 28% with only \$25 in additional hardware. Python, Java, SQL. *Resulted in 3 journal articles, 4 conference publications, and 1 workshop paper.*
- **Macroprogramming System for CPSs** (2007 – 2009). Vector-based programming language and time-travel debugger to ease Cyber-Physical System application development. Matlab, Java, Python. *Resulted in 2 conference publications, 1 workshop paper, and 2 conference demos.*
- **Medical Intake Chair** (2005-2006). A system to automate the intake process at Vanderbilt’s bariatric clinic by automating the entry of patient vital statistics into the STAR medical database. Visual Basic
- **Languages:** C++; C; Java; SQL; JavaScript; XML; Matlab; Python; Visual Basic