

EURA E. SHIN

Email: eura.shin@uky.edu

Website: eurashin.github.io

(903) 526-9112

EDUCATION

University of Kentucky, Lexington, KY

B.S. Computer Science, expected Dec 2019

GPA 3.95/4.0

Honors and awards: Singletary scholar (full-ride program), Honors program, Dean's list (4 of 5 semesters)

SKILLS

Technical Languages

- R, Python
- OOP (Java/C++)
- HTML/CSS/Javascript
- PHP/MySQL
- Mathematica, Matlab

Tools and Framework

- Machine learning (R, Python)
- Unix/command line
- Android development
- Front-end web development
- Git
- Arduino programming
- GIMP

ACADEMIC EXPERIENCE

Smart Home Machine Learning Research

Lexington, KY

University of Kentucky

Dec 2017 - Present

Tools used: Python, Arduino, MySQL, R

Principle lead of a research project with Dr. Simone Silvestri to explore different active learning techniques for a machine learning system connected to a smart outlet. Mentoring student in high school thesis. Currently preparing submission to IEEE International Conference on Computer Communications and Networks 2019.

Medical Informatics Machine Learning REU

Chicago, IL

DePaul University

June 2018 - August 2018

Tools used: R

Designed active learning algorithms to aid in the development of cheaper Computer Aided Diagnosis (CADx) systems for the diagnosis of lung cancer in Computed Tomography (CT) scans with Dr. Daniela Raicu. Funded by the National Science Foundation Research Experience for Undergraduates award at DePaul University. Co-authored one publication (below).

Firmware Engineering Intern

Lexington, KY

Lexmark International

May 2017 - Dec 2017

Tools used: Python, C++, Git, Hostapd, Bitbake

Research and development in embedded platforms department. Developed new test suite that simulates a wireless environment using virtual access points. Winning project of annual Lexmark Student Symposium with 20+ posters on display.

Intern, German Academic Exchange Service

Karlsruhe, Germany

Karlsruhe Institute of Technology

May 2016 - July 2016

Tools used: Matlab, C++, GMesh

Expanded on existing MatLab and C++ software to simulate an episode of atrial fibrillation on a computational model of the left atrium under Axel Loewe and Dr. Olaf Dossel. One of 300 international students awarded the Research Internships in Science and Engineering (DAAD RISE) stipend. 1st place in undergraduate poster competition in computer and information sciences at KAS Annual Meeting 2016.

RESEARCH OUTCOMES

Publications

- Samuel Berglin, [Eura Shin](#), Jacob Furst, and Daniela Raicu. Efficient learning in computer-aided diagnosis through label propagation. In *Medical Imaging 2019: Computer-Aided Diagnosis*. International Society for Optics and Photonics, 2019. (Accepted for publication)

Presentations

- Tapia, A and Shin, E. (2018) *Fractals as a tool for introducing computer science concepts for K-12 and beyond*. Presented at National Conference on Undergraduate Research. Edmond, Oklahoma. Mentor: Dr. Jerzy Jaromczyk, University of Kentucky.

- Shin, E. (2016) *Automated Initiation of Fibrillatory Excitation in Monodomain Simulations*. Presented at Kentucky Academy of Science Annual Meeting. Louisville, KY. Mentor: Dr. Olaf Dossel and MS Axel Loewe, KIT Biomedical engineering.
- Shin, E. (2015). *The Development of a Computer Program to Simplify Complex Knot Diagrams using Global Moves*. Presented at Posters at the Capitol. Frankfort, KY. Mentor: Dr. Uta Ziegler, WKU Computer Science.

LEADERSHIP INVOLVEMENT

Founding Vice-Chair, ACM-W *University of Kentucky* 4 hr/week December 2016 - December 2017

Coordinated all on-campus meetings, organize outreach events, manage collaboration with faculty, manage social media pages.

Volunteer *Newton's Attic* 2 hr/week January 2017 - Present

Assisted in teaching young students engineering skills such as design, manufacturing, and programming through hands on activities.

INTERNATIONAL EXPERIENCE

Harlaxton, England	Costa Rica	Karlsruhe, Germany	Christchurch, New Zealand
Summer 2015	Winter 2015	Summer 2016	Spring 2018
Study abroad: Honors	Study abroad: Honors Costa	Research (listed above)	Semester abroad
Introduction to Literature	Rican Biodiversity Studies	DAAD RISE	University of Canterbury