# EURA E. SHIN

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## EDUCATION

**University of Kentucky** , Lexington, KY
B.S. Computer Science, expected May 2019
GPA 3.93/4.0
***Honors and awards:*** Singletary scholar (full-ride program), Honors program, Dean's list

## SKILLS

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

**Tools and Framework**
- Git
- Unix/command line
- Android development
- Full-stack web development
- GIMP
- Arduino programming

## ACADEMIC EXPERIENCE

**Smart Home Machine Learning Research** — University of Kentucky
Lexington, KY — Dec 2017 - Present
*Tools used:* Python, Arduino, MySQL, R

Principle lead of a smart outlet research project at the University of Kentucky as part of a larger smart home initiative, a collaboration between the University of Kentucky and the University of Missouri Science and Technology to reduce energy consumption. Exploring different active learning techniques for a marketable machine learning system that will predict the device connected to a smart outlet. Mentoring student in high school thesis.

**Medical Informatics REU** — DePaul University
Chicago, IL — 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. Funded by the National Science Foundation Research Experience for Undergraudates award at DePaul University. Co-authored one publication.

**Firmware Engineering Intern** — Lexmark International
Lexington, KY — 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 Institute of Technology
Karlsruhe, Germany — 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.

***Conference Attendance***
- SPLASH 2017, awarded full student scholarship to attend Programming Languages Mentoring Workshop.

***Presentations***
- 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 Biomedicial 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** *University of Kentucky* 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 Introduction to Literature | Study abroad: Honors Costa Rican Biodiversity Studies | Research (listed above) DAAD RISE | Semester abroad University of Canterbury |