EURA E. SHIN

eurashin.github.io

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EDUCATION

Bachelor of Engineering, Computer Science (expected Fall 2019) — University of Kentucky
3.95/4.0 GPA, minor in mathematics and honors program — Lexington, KY

HONORS AND AWARDS

Barry M. Goldwater Scholar — April 2019
Singletary Scholar (full-ride scholarship) — Fall 2016

ACADEMIC EXPERIENCE

Dec 2017 – Present

Undergraduate Research Assistant
University of Kentucky — Lexington, KY — Assistant Professor Simone Silvestri
Tools used: Python, Arduino, MySQL, R
- Developing user-centric active learning techniques for appliance prediction in an IoT smart outlet
- Conference paper submission to IEEE MASS 2019
- Mentoring student in high school thesis

June 2018 – Aug 2018

Medical Informatics Research Experience for Undergraduates (REU)
DePaul University — Chicago, IL — Professor Daniela Raicu
Tools used: R
- Explored methods of cost reduction in Computer Aided Diagnosis (CAD) systems:
  ○ Reducing cost and uncertainty using label propagation
  ○ Using weak supervision to expand expert annotated data
  ○ Predicting diagnostic difficulty using selective iterative classification
- Co-authored two publications (below)

Feb 2018 – May 2018

Ecoinformatics Research, Stouffer Lab
University of Canterbury— Christchurch, New Zealand — Associate Professor Daniel Stouffer
Tools used: C++, Python, Oracle Grid Engine
- Compared ecological communities using network alignment
- Wrapped C++ software to be used in python, added functionality for fixing nodes and weighted graph alignment
- Co-authored one publication (below)

May 2017 – Dec 2017

Firmware Engineering Intern
Lexmark International — Lexington, KY
Tools used: Python, C++, Git, Hostapd, Bitbake
- Developed a new test suite for wireless connectivity testing using virtual access points
- Winning project of annual Lexmark Student Symposium with 20+ posters on display

May 2016 – Aug 2016

Research Internships in Science and Engineering (DAAD RISE)
Computational Modeling Research Intern
Karlsruhe Institute of Technology — Karlsruhe, Germany — Professor Olad Dossel
Tools used: Python, C++, Git, Hostapd, Bitbake
- One of 300 students internationally awarded the DAAD RISE stipend
- Expanded existing software to simulate an episode of atrial firbrillation in a computational model of the heart
- 1st place, undergraduate poster competition, computer/information sciences, KAS 2016 (below)

RESEARCH OUTCOMES

Publications

- **Shin, E.**, Berglin, S., Furst, J., Raicu, D. (2019, July). Expanding annotated data with informed labels for weak supervision. (accepted for publication, 33% acceptance rate)

- Berglin, S., **Shin, E.**, Furst, J., Raicu, D. (2019, March). Efficient learning in computer-aided diagnosis through label propagation. In Medical Imaging 2019: Computer-Aided Diagnosis (Vol. 10950, p. 109501I). International Society for Optics and Photonics.

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 Biomedicial engineering.

- **Shin, E** and Ellis, J. (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

Dec 2016 – Dec 2017
Founding Vice-Chair
ACM-W, University of Kentucky Chapter — Lexington, KY
Founding member and interim president of campus chapter. Coordinated all on-campus meetings, organized outreach events, managed collaboration with faculty, managed social media pages.

Dec 2016 – Dec 2018
Volunteer
Newton's Attic Engineering Camp — Lexington, KY
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

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