UNIVERSITY OF LOUISVILLE
J.B. SPEED SCHOOL OF ENGINEERING

Aaron Fox

Permanent: [Please ask. I would not like to post this publicly online], Burlington, KY 41005
Local: [Please ask], Louisville, KY 40208
Phone: [Please ask], **email:** aaron.fox@louisville.edu
Website: www.aaronfox.me **GitHub:** https://github.com/aaronfox

EDUCATION

Bachelor of Science in Computer Engineering/Computer Science — May 2020
Master of Engineering in Computer Engineering/Computer Science — Expected May 2021
J.B. Speed School of Engineering, University of Louisville, Louisville, Kentucky — **GPA 3.943/4.0**
Highest Honors — Hours Completed: 154

High School Diploma — May 2016
Randall K. Cooper High School, Union, Kentucky — **GPA 4.6/4.0**

SKILLS/COURSEWORK

Technical Skills/Relevant Coursework

- C, C++
- C#, Unity
- Python – Flask, Pandas
- Gradle, Maven
- Web Development – Node JS
- MATLAB
- Java
- Heroku
- Linux
- SQL
- TensorFlow/Keras
- Android Development
- VIM/IntelliJ/Visual Studio
- Embedded Systems
- Docker

WORK EXPERIENCE

Great American Insurance Company — June 2016 - August 2016, May 2020 - Present
DevOps Intern – 40 hours/week — Cincinnati, OH

- Built Docker solution combining a Python Flask app that integrated Checkmarx's security software, GitHub Enterprise, Gradle, and Maven, and then hosted in Pivotal Cloud Foundry for security analysis of all the DevOps team's projects.
- Developed service to improve Health Dashboard UI for code complexity using Java Code Coverage.
- Headed Code Kata presentations demonstrating basic workflows with Docker Hub.

Johns Hopkins Applied Physics Laboratory — May 2018 - August 2018, May 2019-August 2019
Technical Aide Intern – 40 hours/week — Laurel, MD

- Researched and programmed neural networks/deep learning networks using TensorFlow and Keras.
- Performed experimental infrared analysis using MATLAB.
- Worked and developed on an embedded BeagleBone system in a Linux environment.
- Obtained Secret security clearance.

FacilityONE Technologies, LLC — January 2019 – May 2019
Development Team Intern – 40 hours/week — Louisville, KY

- Contributed toward database migration from MSSQL Server to MySQL and PostgreSQL.
- Worked on various bugs and feature requests under an Agile environment.
- Wrote extensions for and debugged Electron apps.
- Updated front-end codebase from Google Polymer 1.0 to 3.0.
- Worked with Python Pyramid.

Reach Ambassador — August 2017 – May 2018
School Ambassador and Computer Engineering Student Mentor — Louisville, KY

- Mentored seventy first year CECS students and guided them through their first year of college.

APPLIED EXPERIENCE

Course/Volunteer Projects:
Global Mamas Volunteer: Volunteered in Ghana for an NGO and helped create and update databases for their HR system using SQL and C#.
Simulation and Modeling: Carried out many simulations and modeling projects, including a Monte Carlo simulation to estimate pi, a 3D spaceship warfare simulation, a disease-spreading sim, and an exponentially distributed elevator sim. (https://github.com/aaronfox/CECS-622-Simulation-and-Modeling)
Artificial Intelligence: Implemented several emerging aspects of AI, including using genetic algorithms with the Wisdom of Crowds approach, using greedy heuristics to solve the Traveling Salesman Problem, and an attempt to solve the NP-Complete Pancake Sorting Problem using the approaches above.

C/C++: Interfaced Arduino circuitry and code with a self-constructed windmill to perform calculations and display output to LCDs. (github.com/aaronfox/ENGR-111-Arduino-Windmill-Display)
Independent Projects:
Personal Website and Blog: Used MongoDB, ExpressJS and NodeJS. (see www.aaronfox.me)
ZombieZ: A first-person-shooter Zombie game created using Unity3D, expanded on after my Game Design class finished. (https://github.com/aaronfox/CECS-528-Game-Design-and-Programming)
Redbird Robotics: Developed on drones using the Robot Operating System library (ROS) for flight control and implemented each sub-team's integration as technology co-captain of Louisville's robotics team.
River City Rocketry: Advanced Payload team's effort to design an autonomous drone that served as payload for a launched rocket.
Hackathons:
Hack the Hill: Placed third by creating a bot that directly contacts and replies to representatives and senators, advocating for Net Neutrality. (github.com/aaronfox/Net-Neutrality-Bot)
VandyHacks : Created a Virtual Reality escape room game using the Unity Gaming Engine for Oculus Rift.
RevolutionUC: Created a fan hub based off the podcast *Hello Internet*, which included games such as "CGP Grey Flappy Bird" and "Podcast Bingo." (github.com/aaronfox/Hello-Internet.)
CatHacks 3: Competed in the Gatton Fintech Challenge and created a web app called "Decentral," a micro-lending loans prototype. (github.com/aaronfox/Decentral)

ACTIVITIES/HONORS

Co-Captain and Technology Manager, **Redbird Robotics**, June 2017 – August 2018
- Won second place in the International Aerial Robotics Competition at Georgia Tech in 2017
- Communicated with all sub-teams through Slack, meetings, and task managing systems
- Used team version control to integrate all the sub-team's work

River City Rocketry, Payload Team Member, August 2018 – May 2020
- Leading efforts toward development of autonomous drone for the 2019 mission

Louisville Makes Games!, January 2017 - Present
- Participating in workshops and meetups to learn collaborative indie game development.

Member, **Association for Computing Machinery** (ACM), August 2016 - present
- Participating in the Hacking Student Interest Group

Tau Beta Pi Engineering Honor Society, December 2017 – Present *(limited to top 1/8th of junior class)*
Brown Fellows Program, June 2016 – May 2020
- One of Kentucky's premier full scholarships which includes two world travel enrichment projects.
- Created independent project in Ghana working with an NGO to assist their SQL/C# database needs.

Phi Delta Theta, Active Fraternity Member
Valedictorian, Randall K. Cooper High School
Freshman LEAD, August 2016 – June 2017
- Engaged in community events and developed leadership skills.
- Initiated and carried out a Clinton Global Initiative Project with my team through Uspiritus.

Kentucky Governor's Scholar Program Alumnus
Team Captain, High School Baseball and Basketball Teams, Cooper High School, May 2015 – May 2016