Aaron Fox
512 W. Ormsby Ave. Louisville, KY 40208

aaron.m.fox3@gmail.com   **859.250.5236**
Website: www.aaronfox.me   **GitHub:** github.com/aaronfox

EDUCATION

J.B. Speed School of Engineering, University of Louisville, Louisville Kentucky
- **Master of Engineering in Computer Science and Engineering** *Expected May 2021*
  - **GPA**: 4.0/4.0
- **Bachelor of Science in Computer Science and Engineering** *May 2020*
  - **GPA**: 3.943/4.0 (Highest Honors)

PROFESSIONAL EXPERIENCE

Great American Insurance Company
DevOps Team Intern   *Cincinnati, OH – Summer 2016, May 2020 - Present*
- Built Docker solution combining a Python Flask app that integrated Checkmarx security software, GitHub Enterprise, Gradle, and Maven, and then hosted it in Pivotal Cloud Foundry for the security analysis of all company developer teams' projects.
- Developed web service to improve the health dashboard UI for developer's code complexity using Java Code Coverage.
- Produced well-documented resources on products that I built and how to use them in the company's Center of Excellence.
- Worked and collaborated remotely with the DevOps team on their applications.

Johns Hopkins University Applied Physics Laboratory
Computer Engineering Co-op   *Laurel, MD – May 2018 - August 2018, May 2019 - August 2019*
- Researched and programmed neural/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
Development Team Intern   *Louisville, KY – January 2019 - May 2019*
- 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 as well as its backend which used Python Pyramid.
- Updated frontend codebase from Google Polymer 1.0 to 3.0.

Reach Ambassador
Computer Engineering Student Mentor and School Ambassador   *Louisville KY – August 2017 - August 2018*
- Mentored seventy first year CSE students and guided them through their first year of college.

APPLIED EXPERIENCE

Global Mamas
Software Development Volunteer   *Cape Coast, Ghana – Summer 2018*
- Volunteered in Ghana for an NGO and helped create and update databases for their HR system using SQL and C#.
- Improved the NGO's infrastructure and efficiency by designing a storage system for employee performance data.

Redbird Robotics
Co-captain and Technology Manager   *Louisville, KY – February 2017 - December 2020*
- Won second place in the International Aerial Robotics Competition at Georgia Tech in 2017.
- Used version control to integrate all sub-teams' work in developing on drones using the Robot Operating System library for autonomous flight control.
- Communicated with and managed all sub-teams through Slack, in-person meetings, and task management systems.

River City Rocketry
Payload Team Member   *Louisville, KY – August 2018 - May 2020*
- Assisted in leading efforts toward development of an autonomous drone that served as the payload for the 2019 mission.

Course Projects
Evaluating Complex Branch Predictors   *www.aaronfox.me/pdfs/Branch_Predictors.pdf*
- Designed and performed a semester-long experiment and research paper according to IEEE guidelines.
- Analyzed the performance and efficiency differences of complex branch prediction algorithms versus less complex systems using a custom-made microarchitecture design framework along with Flexus, an open-source simulation tool.

aaron.m.fox3@gmail.com   **859.250.5236**

Work(out) Smarter   *github.com/aaronfox/Workout-Smarter*
- Designed an Android application using Java, SQLite, and the Google Places API that allows users to create and edit custom exercises, workouts, and record and edit their workout histories to assist users in their fitness journeys.

Solving NP-complete Pancake Sorting using AI   *www.aaronfox.me/pdfs/Pancake_Sorting.pdf*
- After implementing several emerging aspects of AI, including the use of genetic algorithms with the Wisdom of Crowds approach and the use of greedy heuristics to solve the Traveling Salesman Problem, I collaborated with a team to solve the NP-complete Pancake Sorting Problem using a combination of the two approaches above.

Independent Projects

Personal Website and Blog   *www.aaronfox.me*
- Created using MongoDB, Express.js, NodeJS, and Bootstrap and is built and run using Heroku.

ZombieZ   *github.com/aaronfox/ZombieZ*
- A first-person shooter zombie game created using Unity 3D, incorporating various power-ups, enemy AIs, and weapons.

Net Neutrality Bot   github.com/aaronfox/Net-Neutrality-Bot
- Placed third at Hack the Hill (Eastern Kentucky University's hackathon) by creating a bot that directly contacts and replies to representatives and senators on Twitter, advocating for Net Neutrality.

Other Hackathons   github.com/aaronfox/Hello-Internet
- Other past hackathon entries include a virtual reality escape room game created at VandyHacks, a fan hub dedicated to a podcast created at RevolutionUC, and a micro-lending loans prototype designed at CatHacks 3.

TECHNICAL SKILLS

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

AWARDS, RECOGNITION, AND OTHER ORGANIZATIONS

- **Brown Fellows Program**: One of Kentucky's premier full scholarships which includes two world travel enrichment projects which I designed: one volunteering my C#/SQL skills in Ghana and another studying mindfulness across Japan.
- **Louisville Makes Games!**: Participated in meetups and workshops to learn collaborative indie game development.
- **Association of Computing Machinery**: Participated in regular Hacking Student Interest Group meetings.
- **Tau Beta Pi**: Engineering Honor Society.
- **Phi Delta Theta**: Served as scholarship chair and active fraternity member.
- **Valedictorian**, Randall K. Cooper High School
- **Kentucky Governor's Scholars**: Program Alumnus
- **Freshman LEAD**: Engaged in community events, developed leadership skills, and carried out a Clinton Global Initiative Project with my team through Uspiritus.