UNIVERSITY OF LOUISVILLE
J.B. SPEED SCHOOL OF ENGINEERING

Stephen Metzger

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OBJECTIVE First Computer Engineering/Science Co-op Position — January 2 – May 3, 2019

EDUCATION

Bachelor of Science in Computer Engineering/Computer Science — Expected 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 3.366/4.0**
Hours Completed: 48

SKILLS/COURSEWORK

Technical Skills/Relevant Coursework

- HTML5, CSS
- C, C++ **Programming**
- **Java programming**

*Fall 2018

- Calculus I-III
- Differential Equations*
- Advanced Computer Hardware Maintenance
- Information Structures*

APPLIED EXPERIENCE

Course Projects:

C/C++ Developed a 3D tic-tac-toe game with a classmate. The game included two simple AIs that would battle each other to win the game.

JAVA: Led the programming for a high school senior project to make a simple RPG game using the JFrame library.

Python: Created a program that calculated vectors for a surveying project where we surveyed paths around the UofL engineering buildings.

Arduino: Wrote a program for a group project involving the creation of a windmill. The Arduino was responsible for calculating the efficiency of the windmill, and displaying windmill information on an LCD screen. It also communicated with a PLC.

PLC: Utilized ladder logic with a PLC to track and log the rpms of the windmill. The rpms were then sent to the Arduino via Serial output.

Extra-Curricular:

FSAE: Lead programmer and co-captain of the UofL formula one racing team's electronics sub team. We designed and built a functioning race car from parts made in house. The team was a great place to improve upon teamwork, leadership, and communication skills.

Entrepreneurship Competition: received 2nd place award for presenting a business idea to a board of CEOs in a board room in a Entrepreneurship program hosted by Covington Catholic Highschool. There was a cash prize of $200.

Independent Project:

Website Design: Used HTML5, javascript, and CSS. Features personal information, social media, etc (please see www.stevemetzger.me).

Arduino: Designed a steering wheel for a formula one racing car. Took the wheel from concept to design and programmed it using Arduino to interface with the Engine Control Unit and Clutch Actuator. The wheel includes a touch screen and functioning paddle shifters as well as an LED strip to show the RPMs and when to shift.

Video Game: Designed a simple JAVA space dogfighting game that features enemy AI and a boss battle. It is a swarm style game with increasing difficulty with each wave of enemies that the player survives. It is a 2D game that uses my self-created art assets (please see my github: https://github.com/stephenmetzger99)

UofL DerbyHacks 2018: Competed in a hackathon team with two friends, assisted creating an application that uses a neural network to identify empty parking spaces in a parking lot using a camera feed. Still pictures were captured from the camera feed every 15 seconds or so and posted the results to a website the team created.

WORK EXPERIENCE

Ace Hardware April 2016 - May 2017
Sales Associate and Cashier Independence, KY

- Utilized communication skills to assist customers with hardware decisions, handled cash and maintained accuracy
- Worked with the sales team to maintain the store and to stay on top of c Worked with the sales team to maintain the store and to stay on top of changing sales and inventory

Self-Employed June 2017 - August 2017
Lawn Care, Landscaping, & Construction Delhi, Ohio

- Trusted to work on two homes while the homeowner was away
- Built a driveway, laid cinderblock retaining wall, lawncare, and did workshop and garage maintenance

ACTIVITIES/HONORS

Member of UofL FSAE January 2018 – present
Lead Programmer and Co-Captain of the FSAE electronics sub team

Hobbies include programming, building computers, small electronics (wiring, soldering)

Housing Manager, Sigma Phi Epsilon fraternity May 2017- present

RaiseRed Ambassador - October 2017 - February 2018