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Objective

A full time developer position, with a company who can provide me a challenge and uses innovative new technology.

Education

St Charles Preparatory School graduated 2015

The Ohio State University, B.S., Computer Science and Engineering, Honors and Scholars expected 2020

Work Experience

Capital One, McLean, VA 5/19-8/19

Technology Internship Program - ATM Division

Technologies Used: Python, C++, Wireshark, XFS-CEN API

Reverse Engineered USB Drivers for ATMs and wrote custom USB drivers. Created a script to run API calls from XFS-CEN API. Collected USB packets using the script from the ATM with Wireshark. Then reverse engineered the USB signals to be able to run arbitrary code on the ATM and create custom drivers in Python. Finally wrote an automation testing framework for testing of all ATM hardware.

Asurion, Nashville, TN 5/18-7/18

Software Engineering Intern - Sub-billing Division

Technologies Used: Node.js, Python, Mocha, AWS, JavaScript

Worked with back office transactions, creating internal tools in Node.js and Python to streamline account processing. The tool created transaction records and histories for accounts by combining and inferring existing data. Wrote a unit test suite in Mocha for all of my tools and resolved critical issues in existing AWS applications. In addition to working on production servers, led a team presenting a business case to the executives at the company involving the technical direction the company should pursue.

Innovative Systems, Pittsburgh, PA 5/17-8/17

Software Engineering Intern - R&D Division

Technologies Used: Java, VB.Net, SQL Server, Oracle

Created tools used in the daily deployment of database updates and migrations. Converted several stored procedures into a more extensible format. Learned industry software design practices and documentation. Envisioned and developed a cohesive product that is currently in production use. Using Visual Basic, SQL Server, Oracle and Java, the product took user instructions and ran through a complex procedure to transfer data.

The Ohio State University, Columbus, OH 4/16-11/16

Student Information Technology Worker- Chemistry Department

Technologies Used: Powershell, Raspian, RedHat, Windows

Worked with the tech department of the Chemistry department over the summer. Created deployment packages for software across the department. Created scripts in Powershell deployed for use for software automation across the department. Worked with RHEL as a system admin and OS deployment, and Raspian for hardware and software deployment.

Secondary Experience

Inter-collegiate Programming Competition

Competed in an algorithmic programming competition for college students. Represented Ohio State in the East Central Conference Event and placed in top half of participants.

OHI/O Hackathon

Created an Angular application that acts as a driving companion app for cars that tracks fuel efficiency and other metrics pulling from internal device components for a Honda challenge.

FIRST Robotics Team - Programming Division

Worked as the lead programmer on the varsity robotics team. Used LabVIEW to create code for a robot that utilized a variety of mechanisms, such as pneumatics, CIMs, and real time field tracking using the Kinect. The team advanced to the highest stage of the competition, and performed in the top half of the participants.

Honors

Dean's List for Engineering Students 2016-2017

Morril Excellence Scholarship 2015-2020

Engineering Dean's Scholarship 2015

National Honor Society - Borromean Chapter 2014-2015

STEM Exploration and Engagement Scholars 2015-2020

Side Projects

Unity3D Game Development

Technologies Used: C#, TypeScript

Developed several Unity3D games for Android, Windows and Web Browsers. One game was a platform side scroller, featuring unlimited tile generation and score keeping along with various powerups, each influencing the run of play. Ended with limited release on the title.

Raspberry Pi Automation

Technologies Used: Python, Raspian, Java, Apache Server, Telegram

Developed Raspberry Pi project for automating and controlling LED lights from a mobile device. The application invoked Python calls from a Java frontend, with an Apache server backend running the service.
Developed a Telegram messaging application. Using the Telegram API and python, the application would be triggered from a physical button press and send pictures to groups randomized from images sent to the bot.

Project Euler & Kattis

Practice algorithmic problem solving on sites such as Project Euler and Kattis. Programs are written for the best performance and space utilization on frequently completed problems.

Alexa Skills

Technologies Used: TypeScript, Alexa, AWS

Developed an Alexa skill to read, create, and automatically purchase ingredients for recipes at VolHacks 2018.

Android Development

Technologies Used: Android Studios, Java

Developed an Android application for entertainment. The application plays music cues then allows the user to guess what song the cue is from. This was my first foray into native Android development.

Audio Visual Technician

Worked as an Audio Visual technician, in charge of maintaining, running and training other students to work on large events.