Matt Peretick

mattjp@umich.edu · mattjp.co · 734-883-4686

Work Experience

Capital One
July 2017 – Present

Associate Software Engineer — *Richmond, VA*

- Currently building a real-time credit card authorization transaction processing platform on AWS that operates under rigid time and resiliency requirements
- Implemented a business rules management system that allows for dynamic fraud-rules to be authored and altered in a production environment on-the-fly
- Volunteered with Capital One Coders to teach underprivileged middle schoolers programming skills using MIT App Inventor

Stryker Corporation
May 2016 – August 2016

Research & Development Intern — *Kalamazoo, MI*

- Implemented a data analysis application and GUI optimized for strict time & memory restrictions
- Designed an application to statistically analyze & graphically display large sensor databases
- Constructed a device driver for a micro-controller that controlled an external device

Taubman College of Architecture & Urban Planning
June 2015 – April 2016

Software Engineering Intern — *Ann Arbor, MI*

- Developed a web application that simulates the energy consumption of a building over a year
- Implemented algorithms in Java designed to compute the energy efficiency of a given structure
- Wrote front-end HTML and JavaScript functions for client-server communication

Education

The University of Michigan, College of Engineering
September 2013 – April 2017

B.S.E. in Computer Science & Engineering, GPA: 3.258 / 4.0 — *Ann Arbor, MI*

- *Relevant Coursework:* Machine Learning, Operating Systems, Artificial Intelligence, Computer Security, Database Management Systems, Discrete Mathematics, Linear Algebra

Research Experience

Multidisciplinary Design Program
January 2016 – January 2017

UMTRI Automotive Cybersecurity — *Ann Arbor, MI*

- Researched creative new ways to electronically breach and improve car security
- Collaborated to construct malicious Python scripts that attempted to manipulated a car's CAN bus
- Gained industry knowledge of CAN network protocols as well as SocketCAN drivers

Personal Projects

- *Fwip:* Android app that uses the Google Maps API to help college students find and share free food
- *Verdeckt:* Python Flask website hosted on AWS that helps users find streetwear brands easily
- *Pics 'n' Words:* Python program that uses PIL to recreate an image using only colored text
- *Modulator:* Modulus calculator designed for fractions & negatives numbers, written in JavaScript
- *Arnold Fib:* Fibonacci number calculator written in the hilarious programming language, ArnoldC

Technical Strengths

- *Fluent Languages:* C++, Java, Python
- *Languages:* JS, MATLAB, Bash, HTML/CSS
- *AWS Certified Solutions Architect:* November 1st, 2017 – November 1st 2019

All project source code is available at mattjp.co