

Education:

University of Michigan, Ann Arbor, Senior, B.S. Computer Science 2018

Presidential Scholar, Jean Fairfax Scholar, National Merit Scholar, 3.3 GPA

Classes: (482) Operating Systems | (388) Computer Security | (485) Web Development

Skills:

Programming Languages: Python, Java, C++, Javascript, HTML/CSS, Ruby

Frameworks: Spring, Node.js | Angular.js, React.js, Rails

Database: SQL, Postgres, noSQL(Mongodb, Cassandra), Elastic Search, Apache Kafka

Testing: JUnit, TestNG with Cobertura, Selenium

Tools: Agile/Scrum, Maven, Jira, Git, SCSS

Data Management Software, Adobe Master Suite CS5.5, Autodesk, MATLAB, R

Experience:

Uptake Technologies, Chicago, IL - Software Engineering Intern - Python | Java 2017 -

Technical Proof of Model Team. Berkshire Hathaway Energy Wind Assets

- Designed and built memory constant data ingestion pipeline using Python and C. Used to sort, merge and write extremely large volumes of historic data into Cassandra and Apache Kafka. Helped to scale UptakeWind from 66 to 706 turbines in two weeks.
- Reduced pull time of historic data by 748% through optimally efficient use of limited API calls.
- Built scalable rules engine that runs in constant time on live sensor data streams. Allows Uptake to write arbitrarily complex rules and change business logic without redeploying. Uses Nashorn to compile Javascript written rules into Java byte code which is then executed that directly in the JVM.

Court Innovations, Ann Arbor, MI - Software Engineering Intern - Javascript | Java 2015 - 2016

- Implemented AWS as a CDN. Halved website loading time by pulling assets concurrently to the DOM.
- Used noSQL Mongo Aggregation and Predicate Executors to create a scalable table filtering system to display various objects and product data, reducing search time from 5 minutes to under 200ms.
- Developed web based enterprise applications using spring framework.
- Added database abstraction layers to safely reindex SQL paths for case management software.

Montec Trading, Ann Arbor, MI - Software Engineering Intern - C++ | Java 2014 - 2015

- Improved existing algorithmic trading yield by 0.73% with a Neural-Network like machine learning program that enabled intelligent component recombination during backtesting.
- Built system to log incoming tick data for 8000+ securities and relay a subset of that information to an external supercomputer. Exploited inline spatial locality to reduce average disk access time by 70ms.
- Worked on trading software alongside team of 7 programmers through multiple development cycles.

Personal Projects:

GoingPostalPolitics.com, React.js | Ruby on Rails | Firebase | Postgres 2016

- Built platform to send government representatives mail. Allows activists to send hundreds of physical postcards to any government representative.

Adaptive Software Development C++ | Java | Cassandra | Postgres 2012 - 2014

- Implemented a polynomial based AI system, designed to predict pseudo-random number strings with increasing accuracy. Trained on 405 freeway traffic, average windspeed in Mercer County (West Virginia), applied this towards predicting Stock fluctuations. Linked through Interactive Brokers (IB) API.
- Designed and integrated a diverse range of real-world financial software, such as internet driven market volume maps and algorithmic motion detectors.

iOS & Mobile Development 2012 - 2015

- Created and listed six applications to the Apple Appstore under the name ieasyaf

Eagle Scout, Boy Scouts 2013