JESSE BARTOLA

Email: jrbartola@gmail.com **Phone:** 862-485-4641
LinkedIn: https://www.linkedin.com/in/jessebartola/ **Website:** jessebartola.com, github.com/jrbartola

EXPERIENCE

SOFTWARE ENGINEER INTERN
Google / Cambridge, MA / May 2018 - August 2018
- Interned on the Site Reliability Engineering team, developed an Angular user interface (Golang backend) that allows Google engineers to perform CRUD operations on their project dependency version database without needing to use the command line
- Authored a project design document detailing the problem statement, requirements, mockups, user stories, test cases, design tradeoffs and future development plans for a user interface replacing a commonly used database command line system
- Deployed code into the production codebase that is used by Google engineers across 3 different teams to speed up their development cycle by providing a better user experience via a UI wrapper around the existing command line tool

SOFTWARE ENGINEER INTERN
Charles River Analytics / Cambridge, MA / May 2017 - August 2017
- Aided in the full-stack development of a React.js web application design to detect system hardware failures onboard ships in the Navy
- Formulated Bayesian Network models for hardware fault detection using the Figaro probabilistic programming package for Scala, improving average classification accuracy by ~15% compared to the original rules engine classifier
- Integrated a sandbox environment for testing of observation patterns against classification algorithms to ensure unobserved input sequences could still be tested without the need to collect them from live ships

SCALA WEB DEVELOPER
University of Massachusetts, Amherst / Amherst, MA / September 2017 - Present
- Led the development of the UMass MS and PhD admissions software which lends itself to ~2000 student applicants per year
- Improved plugin compatibility issues by migrating the front end from Scala.js to React & Typescript (wrote 3000+ lines of code)
- Utilized Scala's Future concurrency model to reduce server request latency by up to 20%, resulting in improved user experience on the front end
- Optimized Postgres infrastructure by refactoring relational database design patterns, such as migrating legacy JSON values to SQL data types and introducing a one-to-many relationship for users so faculty may login to the same account with multiple emails
- Introduced numerous features including the ability for professors to rate applicants, parser combinators to quickly search for given fields in a list of applications, aggregation of user statistics using Postgres queries to inform them which applicants they have yet to review

TEACHING ASSISTANT
University of Massachusetts Amherst / Amherst, MA / September 2016 - May 2018
- Oversaw the curriculum of Introduction to Functional Programming in Scala as an Undergraduate Teaching Assistant for a class of 150 students
- Orchestrated class discussion sections and held weekly office hours to provide support for students outside of the classroom

LEAD PLATFORM DEVELOPER
TxtAdvice / West Orange, NJ / June 2015 - November 2015
- Developed an online SMS/MMS messaging interface providing users with real-time fashion advice from professional stylists (featured on CNN)
- Assembled a RESTful API through the use of Twilio's SMS service and Python's Flask web framework

- Collected and analyzed usage statistics utilizing PostgreSQL to accommodate user experience via suggested fashion advice
- Employed React.js to provide a dynamic and interactive SMS user interface while implementing project-specific MVC design patterns through coordination with a team of developers

PROJECTS

CRYPTO-SIGNAL (JANUARY 2018)

- Top contributor to the crypto-signal software, providing real-time technical analysis alerts to cryptocurrency traders
- Attained 1500+ stars and 400+ forks on the main Github repository (https://github.com/CryptoSignal/crypto-signal)
- Participated in regular code reviews of pull requests for numerous open-source collaborators
- Engaged in online support for users of the software through a project-dedicated Discord channel

MEDICUS (OCTOBER 2016)

- Led a team of students in engineering an iOS application employing machine learning via convolutional neural networks to diagnose skin conditions within a predetermined confidence interval
- Developed probabilistic models to make sense of image classification results provided by Clarifai's image recognition API

EDUCATION

COMPUTER SCIENCE, MATHEMATICS (B.S.)

University of Massachusetts Amherst / Amherst, MA / 2019 / 3.93 GPA

SKILLS

PYTHON / **SCALA** / **JAVASCRIPT** / **TYPESCRIPT** / **JAVA** / **HTML** / **CSS** / **SQL** / **GO**