William Truong

WORK EXPERIENCE

Health Fidelity, San Mateo, CA,
Technical Team Lead (Jan 2018 - Present)
Senior Software Engineer (Oct 2016 - Dec 2017)

Managerial Responsibilities
- Lead Risk Analytics team in designing and building out an API to allow physicians to automatically get a list of probable diagnoses for a given patient, given past billing history and clinical notes, by providing a queryable **GraphQL** interface to serve dataset generated through periodically running jobs on **AWS EMR** [**Apache Spark**, **Node.js, PostgreSQL**].
- Guide senior software engineer to utilize **AWS Redshift** as a data warehouse to store click-based events for the purposes of reporting and serving KPI dashboards.
- Strategize with product management to prioritize product roadmap, juggling between maintaining existing product line and implementing new functional requirements.
- Interview candidates for junior and senior software engineer positions and hire based on growth potential, technical ability, and cultural fit.
- Mentor junior software engineers by pair programming, reviewing work, providing feedback, and guiding them to find the right solution for a given problem.

Technical Duties
- Build HIPAA compliant multi-tenanted RESTful web services under the **Spring Framework** to assist health insurance plans to improve their risk adjustment performance analyzing administrative and clinical patient data through batch processing to find gaps in care for the patient and identify patient risk for the insurance plan, which is communicated through KPI dashboards, maps, graphs, and reports. [**Java, JDBC, MySQL, Scala, Apache Spark, Kafka, S3, EMR, CloudFormation**]

Highlights
- As an individual contributor, spearheaded effort and educated stakeholders to transition existing data aggregation and batch processing pipeline under **Java, JDBC, and MySQL** to a more performant, scalable, and distributed approach with **Scala** and **Apache Spark** to decrease costs and address business need of generating larger reports under a shorter amount of time.
- Exposed team to a developmental workflow using **Jupyter Notebook** to rapidly prototype out the existing batch processing pipeline to serve as a proof of concept, showing potential to scale as well as having 56x performance gains for 100-gigabyte scale datasets.
- Took initial ownership of involvement to integrate Risk Analytics platform with **Apache Kafka** event infrastructure to consume real-time events.
- Work very closely with architect and infrastructure team to ensure new Kafka cluster and event infrastructure is ready for production by providing constructive feedback from downstream consumer's point of view.
- Work with product team to model the user click events into several state transition diagrams to be used inside a **Redshift** data warehouse.
- Applied prior working knowledge with bitsets and bitwise logic as an embedded systems engineer to speed up rule matching behavior to take only .05 percent of the original time.

Fluid, San Francisco, CA,
R&D Software Engineer (Feb 2016 - Oct 2016)

Part of Fluid Expert Personal Shopper (XPS), the first e-commerce SaaS solution aimed to supply online retailers with a service recommending products to customers (1800flowers.com, The North Face) through conversation by utilizing NLP and Machine Learning techniques under the AWS ecosystem.
- Built RESTful web services under **Node.js** with **Express** for implementation team to utilize for building frontend single page applications. [**AWS EC2, AWS S3**]
- Used **AWS Kinesis** to transport click events to **AWS Redshift** for the product team to measure add to cart conversion and customer behavior.

- Created an SGD classifier with text input to characterize products for implementation team to use on customer datasets. **[pandas, scikit-learn, Jupyter Notebook, Elasticsearch]**

Personal Sabbatical (Apr 2015 - Jan 2016)

Seized opportunity to take time off prior to moving back to Silicon Valley in order to pursue the dream of traveling Southeast Asia by motorcycle.
- Managed and assessed risk in challenging environments and life-threatening situations.
- Polished soft skills communicating with people from diverse backgrounds.

Enrolled and completed Udacity Data Analyst Nanodegree.
- Exposed to the data analysis process of wrangling, exploring, analyzing, classifying, and visualizing data by completing project-based work **[d3.js, R, Python, pandas, scikit-learn, Jupyter Notebook]**.

General Atomics Aeronautical Systems Inc., Sept 2011 - Apr 2015, (San Diego, CA)
Senior Software Engineer

Worked with project engineers, vendors, and customers to create system and software level requirements, storyboard proposals for new features, define new software interfaces, write system test procedures, and implement software for flight and ground components in several unmanned aerial systems under the service-oriented architecture paradigm **[C/C++, Python, POSIX, Linux, VxWorks, MIL-STD-1553, TCP/IP, Pthreads, Qt, X11/Motif, XML]**.

Technical Lead, MQ-9 AFSOC, Jan 2014 - Apr 2015
- Within one year, software team fielded 3 major system releases under 6-month release cycles, as opposed to the previous team working on traditional 1-2 year release cycle, with one release being a finalist in Aviation Week Program of Excellence Awards, 2015.
- Spearheaded effort to refactor a flawed design with touch system responsible for multiplexing mission critical video sources on ground control system by using MVC and OO principles **[Linux, POSIX sockets, sigslot, X11/motif, C/C++]**.

Technical Lead, MQ-9 Brimstone Demonstration, Oct 2013 - Dec 2014
- Lead a software team to demonstrate potential capabilities of integrating MBDA's missile platform onto the MQ-9 platform in a short span of 3 months **[C/C++, MIL-STD-1553]**.

Developer, MQ-1 US Air Force UAV Team, Sept 2011 - Apr 2012 (Under Contract), Apr 2012 - Oct 2013

Northrop Grumman Information Systems, Jan 2009 - Sept 2011, (Sacramento, CA)
Technical Lead (Jan 2011 - Sept 2011)
Software Engineer (Jan 2009 - Dec 2010)

Worked closely with program management, system engineers, electrical engineers, sensor operators, and integration team to field the last release of ELINT subsystem under Guardrail Modernization contract.

Created and maintained applications under the service-oriented architecture paradigm to allow sensors on multiple aircraft to survey, collect, and aggregate data in real-time by line of sight communication **[C/C++, Pthreads, TCP/IP, DNS-SD, yacc, lex]**.

TECHNICAL SKILLS

Programming Languages: Scala, Java 8, Python, Node.js
Frameworks and Systems: Apache Spark, Apache Kafka, PostgreSQL, MySQL, AWS Redshift, Spring, Express, GraphQL, Elasticsearch

CERTIFICATIONS

Big Data Analysis with Scala and Spark, *École Polytechnique Fédérale de Lausanne on Coursera*, Apr 2017 + Data Analyst Nanodegree, *Udacity*, Aug 2016 + Machine Learning, *Stanford University on Coursera*, Jan 2016.

EDUCATION

B.S., Computer Science, *University Of California, Davis*, 2009