

EDUCATION

- **The University of Chicago** Chicago, IL
Master of Science in Computer Science; GPA: 3.80 Aug. 2017 – Jun. 2019
- **Michigan State University** East Lansing, MI
Bachelor of Arts in Finance; GPA: 3.50 Aug. 2007 – May. 2011

EXPERIENCE

- **M1 Finance** Chicago, IL
Software Engineer Nov 2019 - Present
 - **Performance:** Performance is a Scala, Lagom, Akka, Kafka, SQS service that provides cashflow and performance calculations to our users (serves up more than 450 RPS under peak load). Refactored much of the core logic for dividends and trades, re-migrated tens of millions of records, and made the system more stable.
- **University of Chicago: Center for Translational Data Science** Chicago, IL
Software Engineer Apr 2019 - Nov 2019
 - **GDC API:** The GDC API is a Python-Flask system that handles over a 1 million downloads a month and over 10 petabytes of data downloaded annually. Implemented new features like admin endpoints and tarfile download of clinical data.
 - **Reports API:** Convert the reporting features of the GDC API into a microservice. Containerize and deploy the new microservice into various environments. Enhance batch processes to backfill data with additional information (ie. genomic experimental strategy).
 - **ESBuild:** ESBuild is a Python batch-layer system that creates the data for Elasticsearch indices. Refactored and improved caching and denormalization processes of the system improving memory consumption and runtime performance.
- **UChicago Systems Research on Availability, Reliability, and Efficiency** Chicago, IL
Research Assistant Nov 2018 - Apr 2019
 - **MittOS Memory:** Advised by Dr. Haryadi Gunawi and Cesar Stuardo. Research focus is on making distributed systems more performant by being able to signal to other machines that the JVM is in a stop-the-world garbage collection phase. Solutions implemented in OpenJDK 8, Java, and C++.
- **National Opinion Research Center at the University of Chicago** Chicago, IL
Software Developer Oct 2018 - Apr 2019
 - **Getting on Track:** Getting on Track is an education application that helps teachers and social scientists measure nationwide kindergarten readiness. Maintained the application, implemented new features, and modernized the Django-JQuery application into separate front-and-backend applications (VueJS and Django-REST).
- **Braintree (a Paypal Company)** Chicago, IL
Data Operations Jun 2018 - Aug 2018
 - **Batch Systems:** Develop batch systems for the data operations team to process over 12 trillion records. Aggregate various information sources (incidents and other operational data sources) to determine merchant satisfaction levels using a logistic regression model.
- **Information Services Group (ISG)** Detroit, MI; Stamford, CT; Chicago, IL
Consulting Manager Dec 2011 - Apr 2019
 - **Strategy & Technology Consulting:** Specialist in transaction advisory and cloud advisory. In my consulting career I have been ranked as a top-five consultant in the firm and have been awarded the chairman's club honor twice (an honor given to less than 2% of the company annually).

PROJECTS

- **BeautyShelf:** Mobile and web application that keeps track of makeup expiry ([beautyshef.app](#)). Developed the entire web front-and-backend systems in React, Flask (Python), Docker, and AWS.
- **Twitter-Stocks:** Big-data, Lambda architecture based system with ingestion, batch, serving, speed, and web layers. Built using Kafka, Spark (Scala), Hive, HBase, Flask (Python), and VueJS.