

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

- **University of Chicago: Center for Translational Data Science** Chicago, IL
Software Engineer Apr 2019 - Present
 - **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.
 - **Python3 Upgrade:** Migrate a number of systems to be Python3 compatible. Removed unnecessary internal dependencies and dead code, upgrade external libraries, fix compatibilities, and increase code coverage where necessary to test various code branches.
- **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.

PROJECTS

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