Mark Bryan

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Education

Cornell University, College of Engineering · B.S., Computer Science *Ithaca, NY May 2018*
Dyson Business Minor for Engineers. College of Engineering Dean's List (5 nominations)

Experience

Broadway Technology · *Senior Software Consultant* *New York, NY July 2018 – Present*

- Designing, building, and deploying mission-critical fintech software solutions to satisfy complex client requirements.
- Built backend services for client's expansion into margin trading and cryptocurrency loan offerings, encapsulating the business logic and risk management for these workflows into a backend API for downstream client integrations.
- Implemented support for Immediate-Or-Cancel orders in matching engine service to enable client's expansion into new trading offerings, conducting performance testing to measure performance across benchmark workloads.
- Improved quality and reliability of crypto exchange adaptors through critical bug fixes and enhancements.
- Improved usability of Broadway's trading GUI applications with feature enhancements like saved user layout configuration and customizable pricing controls.
- Led Python training course for Broadway's new-hire onboarding program, teaching basics of Python programming and how to develop Python services within Broadway's distributed platform.

Yelp · *Software Engineer Intern* *San Francisco, CA Summer 2017*

- Improved data documentation service and data warehouse reporting as a member of Yelp's Consumer Analytics and Metrics team.
- Developed backend infrastructure for collecting, cleaning, and analyzing usage data for Yelp's data warehouse and implemented frontend visualizations in React to convey information to data warehouse administrators.
- Provided insights into how Yelp engineers query the data warehouse, guiding decisions to improve system performance.

Cornell Database Group · *Research Assistant* *Ithaca, NY Jan 2017 – May 2018*

- Applied data mining algorithms to research efficient representation of relational and time series data through audio interfaces.
- Collaborated with Professor Immanuel Trummer to develop a database system funded by a Google Faculty Research Award.
- Built prototype database system written in Java which translates datasets into speech output using algorithms that minimize speaking time subject to user-defined precision constraints.

Toast · *Software Engineer Intern* *Boston, MA Summer 2016*

- Improved database layer of Toast's core web application by refactoring the way developers write and release changes to data sources, increasing the reliability of deploying database schema migrations in both development and production environments and improving the efficiency of the engineering team.
- Presented new development workflow to engineering team and developed tooling and documentation to facilitate the adoption of the new schema migration process.

Publications, Presentations, and Awards

Immanuel Trummer, **Mark Bryan**, Ramya Narasimha. "Vocalizing Large Time Series Efficiently." PVLDB Volume 11, No. 11, July 2018.

- Honorable mention for Computing Research Association's 2018 Outstanding Undergraduate Researcher Award.

Immanuel Trummer, Jiancheng Zhu, **Mark Bryan**. "Data Vocalization: Optimizing Voice Output of Relational Data." PVLDB Volume 10, No. 11, August 2017.

- Presented research at the September 2017 VLDB Conference in Munich, Germany.

Projects

CiceroDB · *Developer* *Ithaca, NY Jan 2017 – May 2018*

- Experimental database system written in Java which offers different modules to translate SQL query results into voice output.
- Built React frontend which allows users to submit natural language queries to the system and generate natural language descriptions of query results.
- Received Lockheed Martin Award at BOOM 2017 and JP Morgan Award at BOOM 2018, Cornell's annual showcase of student research in digital technology.

Cornell App Development · *iOS Developer* *Ithaca, NY Aug 2015 – Aug 2017*

- Contributed to multiple iOS applications written in Swift as a member of the Cornell App Development project team.
- Built audio player infrastructure for podcast player and music sharing applications.

Programming Skills and Technologies

Java · Python · C++ · SQL · Linux · Windows · JavaScript · React

Interests

Guitar · Cold-brewed coffee · *The Office* · St. Bernard dogs