

Yinlu (Zoe) Gong

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Education

Northeastern University

Sept. 2023 - Now

Master of Science in Computer Science

Relevant Coursework: Web Development, Database Management, Algorithm, Data Structure, Distributed System

Columbia University, Graduate School of Arts and Sciences

Sept. 2018 - Dec. 2019

Master of Arts in Economics

Bryn Mawr College

Sept. 2014- Dec. 2017

Bachelor of Arts in Economics (with **Magna cum laude**)

Technical Skills

- **Programming Languages:** Java, Python, JavaScript, SQL
- **Web Development:** React, Node.js, Express, MongoDB, PostgreSQL, RESTful APIs, CSS
- **Data Science Tools:** pandas, seaborn, Matplotlib, Tableau, matlab, myBatis, R, STATA,

Projects Experience

Distributed Ski Resort Data System (AWS EC2, DynamoDB, RabbitMQ, and Java servlet)

- Architected and implemented a high-throughput scalable distributed application processing 20,000+ transactions per second using Java servlets, RabbitMQ, and AWS DynamoDB with optimized multi-tier design.
- Designed an efficient NoSQL database schema with strategic partition keys and Global Secondary Indexes to support complex query patterns while maintaining sub-10ms response times for critical data access paths.
- Engineered resilient data processing pipelines with parallel thread pools, batch operations, and intelligent retry mechanisms, resulting in 4x increased throughput.

Multiplayer RPG Database and Web Interface Development (MySQL and Java)

- Designed and implemented a MySQL relational database for a multiplayer online role-playing game, modeling players, characters, jobs, inventories, equipped items, currencies and attributes.
- Developed a JSP-based web front end integrated with JDBC to enable dynamic interaction with the database, including CRUD operations and real-time data representation.

Bluesky Social Media Application – Full Stack Web Development Project (JavaScript and React)

- Designed and implemented a responsive, user-friendly interface using React and CSS, enabling seamless navigation across home, login, and profile pages.
- Developed and secured **RESTful APIs** with Node.js, Express, and **MongoDB** to support user authentication, session management, and CRUD operations for posts.
- Deployed and maintained the application on Render, ensuring accessibility and showcasing team collaboration via a GitHub repository.

Recipe Management Application (Java, Spring Boot, JPA, RESTful API)

- Developed a full-stack Recipe Management System using Java Spring Boot with RESTful API architecture, implementing complex domain models, JPA repositories, and service layers to manage recipes with categories, ingredients, and user authentication.
- Built a scalable **Spring Boot** application featuring advanced data operations including custom search functionality, efficient relationship mapping, and comprehensive CRUD operations while following industry best practices for clean architecture.

GitLet (Java)

- Engineered a custom version-control system emulating Git functionalities, including file versioning, branching, and merging.
- Delivered efficient commit and checkout features for seamless directory management.
- Implemented branch management and streamlined merging processes, simplifying the integration of changes across branches.

Working Experience

Goldman Sachs, *Financial Crime Associate*, Salt Lake City, UT

August. 2020- Jan. 2023

- Reviewed trends in underlying data and advised on modeling methodologies to detect market data and fraudulent activities.
- Conducted risk assessments on 500+ high-risk transactions per month, identifying potential fraud, money laundering, and sanctions violations.
- Utilized data analytics tools (SQL, Excel) to identify 20% efficiency improvements in alert triaging and investigative processes.

Columbia University, *Department of Economics, Research Assistant*, New York, NY

June 2019-Dec. 2019

- Performed data cleaning, visualization, and analysis of Venture Capital Investors profile database with python (pandas, seaborn) and STATA.
- Operated data entry of 1000+ Venture Capital Investors' portfolios in coordination with Columbia Data Management Center for preparing an economic experiment that investigates matching friction between venture capitalists and entrepreneurs.