

# Lireng Zheng

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## Experiences

### Software Engineer

July 2023 - Present

RTX Corporation

New York, NY

- Built **12+** features to **4+** applications that improve latency of **10K+** requests by **300ms** using **TypeScript, Spring, SQL**
- Designed system to process **200,000+** line items per budget file into **Oracle**, reducing project creation time by **50%**
- Implemented migration of services into **Snowflake, AWS, and Git**, supporting program requirements for big data size
- Led technical meetings with other teams and stakeholders to deliver MVP promptly through **Zoom, Teams, and Jira**

### Software Engineer

November 2022 - June 2023

Itlize Global

New York, NY

- Designed, built, and tested the Joole Marketplace Platform (JMP) for businesses to develop an online marketplace for building products. Utilized **Mockito** and **JUnit** for testing
- Visualized JMP by delivering features for personalizing profiles and user support using **TypeScript, Spring, and SQL**
- Migrated JMP into the cloud using **AWS CDK, ECS, S3, and Lambda** to manage serverless technology

### Software Engineering Intern

July 2022 - August 2022

BeaconFire Corporation

New York, NY

- Directed the intern team to model and normalize AdventureWorks data warehouse using **MySQL** and **Hibernate** to speed up query processing by **15%** and backed up database files in **3NF**, providing proper transactional management
- Implemented a Guessing Game by having users attempt to guess randomly generated numbers using **OOP** design

## Projects

### OtakuSpeak - Japanese Learning App

In Progress

- Created a language learning app for anime fans to learn Japanese through anime clips using **Angular** and **Flask**
- Implemented transcribing tool for audio clips using **Whisper** to provide translation, pronunciation and cultural notes
- Built extensive library feature, enabling users to browse through over **80+** anime titles and access direct viewing links

### Cracking the Stock Market - Guide To Success

20 Hours

- Designed **RAG** system leveraging **LlamaIndex, PyTorch** and **TruLens** to curate key fundamentals for stock trading
- Developed **Python RAG** system using the sentence-window and auto-merging retrieval techniques to improve metrics in answer relevance, context relevance, and groundedness on over **40+** trading-related evaluation questions
- Implemented an interactive dashboard that displays resulting evaluation metrics using **Plotly, NumPy, and Pandas**

### DistrictMe - React Web App

50 Hours

- Created a **RESTful React-Leaflet** mapping web app that performs gerrymandering and generates district plans
- Processed US Census States demographic data using the computational cluster **SeaWulf** and the **MCMC** algorithm in **Spring** to aggregate congressional districts into **10,000** random districtings based on user set constraints
- Utilized **GeoPandas** and **Shapely** in **Python** to generate precinct nodes and edges that identify contiguous precincts

### Saleos - Online Dating App

30 Hours

- Created dating webapp using **JDBC Apache Tomcat**. Allows users to browse and query other users based on set filters
- Implemented user access control through login authentication, differentiating manager, customer rep, and user in **Java**
- Designed schemas for all users data and normalized tables into **3NF** using **Lucidchart** and **MySQL**

## Activities

### AI NYC (Dev Community)

Ongoing

### Online Networking Events/Organization Hackathons

New York, NY

- Hosted workshop at **2+** hackathons by demoing **AI RAG** app and teaching attendees on building their own versions
- Engaged in online speaker info-sessions and Q&A events with the founder of **NexHealth, AppLovin**, and CPO of **Hinge**

### Software Engineering Tutor

Oct 2016 - Jan 2021

Angel Advantage Center

New York, NY

- Facilitated student learning through hands-on projects focusing on web development in **HTML, CSS, and JavaScript**

## Technical Skills

Languages- **Proficient:** Java (7yr), SQL (5yr), TypeScript (4yr) | **Intermediate:** JavaScript (5yr), Python (3yr) | **Beginner:** C (2yr)

Software- AWS | Snowflake | Oracle | Spring | Maven | React | Angular | JUnit | Mockito | Git | Jenkins | Jira | OpenAI | VSC

## Education

Stony Brook University, Stony Brook, New York

May 2022

Bachelor of Science in *Computer Science*

Relevant Coursework: *Software Engineering - Data Structures, Algorithms | Database Systems - RDBMS, Schema Designs*