

# RAY QIN

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## EDUCATION

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**University of California, San Diego**, San Diego, CA

Sep 2019 – Mar 2023

- **B.S. Mathematics - Computer Science**, B.S. Mechanical Engineering, **GPA: 3.9+/4.0**, Provost Honors

## WORK EXPERIENCE

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### Eightfold

Jun 2022 - Present

*Software Engineer, intern*

*Mountain View, CA*

- **Data Warehouse**: Owned several high-impact projects that improved current ETL pipelines and the monitoring infrastructure across large-scale distributed backend components.
- **Atomic ETL Pipeline**: Authored and implemented a design document for an atomic data loading process. Met team Q2 goal by slashing data inconsistency down to less than 2%.
- **Consistency Tracker**: Extended consistency trackers to company-level granularity across monitoring dashboards, email reports, and alarms to 56 tables across RDS / Redshift / Firehose.
- **EMR Dashboard**: Built a debugging dashboard in React. Developed a flask api to process data from s3 buckets and airflow. Enabled engineers to be 40% faster in debugging spark jobs.
- **Engineering Reliability**: Wrote pytest and selenium unit tests for the CI/CD pipeline. Provided constructive feedback in code reviews. Optimized database queries to avoid timed-out requests.

### MEDsmart

Sep 2021 – Mar 2022

*Software Engineer, intern*

*San Diego, CA*

- **System Automation**: Cut operation costs by 11% in clinics by tracking and automating the medication refill process. Slashed inventory waste by 4% by automating database queries with AWS.
- **Inventory Forecast**: Reduced shortage response time by 7% by generating inventory reports and visualizations. Estimated future usage of medication by Implementing the LSTM algorithm in Python.

## PROJECTS

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### SQLightning

Database Management System

- **Software Design**: Developed a relational database command line terminal with core SQL functionalities in C++. Led software architecture design for the data flows, component interactions, and abstractions.
- **Reliability**: Improved database robustness through input tokenizer, typed-stream encoder, and error reporting system. Increased team reliability by utilizing CI/CD pipeline, unit tests, and integration tests.
- **Performance**: Optimized performance by 83% with the primary key index and the LRU cache system.

### Data Storm

Full Stack Development

- **Web Development**: Built a cloud drive and an analytics dashboard with React, Firebase, HTML, CSS, and JavaScript. Collects and analyzes visitor information with JavaScript and Apache server log files.
- **RESTful API**: Designed a RESTful API using Node.js, Express.js, and Passport.js to handle client-side API calls. Implemented secured CRUD routes, authentication, authorization, and custom roles.

## SKILLS

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- **Tech Stack**: Python, Java, C++, HTML, CSS, JavaScript, AWS, Azure, Docker, React, Node, SQL, Bash.
- **Core Skills**: Backend Development, Cloud Computing, Distributed Systems, Data Infrastructure.