

# 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. Computer Science**, Mathematics & 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*

- **Core Infrastructure:** Securing the data lake infrastructure by extending consistency trackers to company id level granularity across monitoring dashboards, email reports, and alarms to 56 tables across RDS/Redshift/Firehose.
- **Backend Development:** Building the production backend using Python and AWS services. Authoring a design document for an atomic data migration process. Developing internal tools for engineers to be more effective.
- **Engineering Reliability:** Improving reliability by developing thorough and precise unit tests for the CI/CD pipeline. Optimized database queries to avoid timed out requests. Using Jira for project management.

### 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 and synchronization with AWS.
- **Inventory Forecast:** Reduced shortage response time by 7% by generating inventory reports and visualizations. Estimated future usage of medication by Implementing LSTM machine learning algorithm in Python.

### Qualcomm Institute

Dec 2020 – Jun 2021

*Software Engineer, intern*

*San Diego, CA*

- **Data Integration:** Gained insights by building composite business profiles through integrating data sets from multiple sources. Spearheaded business data collection and processing from Yelp API and open city data sets.
- **Frontend Development:** Built responsive data visualization sites with HTML, CSS, Bootstrap, and JavaScript.

## 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, interfaces, 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, integration tests, and sprint board.
- **Performance:** Optimized performance by 83% with the primary key index system 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 client-side JavaScript and Apache server log files.
- **RESTful API:** Designed a RESTful API using Apache, Node.js, Express.js, and Passport.js to handle client-side API calls. Implemented secured CRUD routes, authentication, authorization, and custom roles for data access.

### Driverless

Deep Learning, Robotics

- **Deep Learning:** Built and programmed a 1/8 scale autonomous car that performs on tracks with over a 90% success rate. Implemented Tensorflow and OpenCV libraries in Python in embedded NVIDIA Jetson Nano.

## SKILLS

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- **Tech Stack:** Python, Java, C++, HTML, CSS, JavaScript, SQL, Git, Docker, Amazon Web Services, Linux, Bash, Firebase, MongoDB, Bootstrap, Apache Server, Azure, Spark, React, Node, Express.
- **Core Skills:** Agile Development, Software Architecture, Organizational Leadership, Object Oriented Programming, Cloud Computing, Distributed Systems, System Design, Machine Learning, API Development.