

# RAY QIN

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## EDUCATION

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### University of California, San Diego

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:** Leading a project that detects and reduces data inconsistencies caused by data migration from multiple sources to the data lake. Enabling 40+ engineers to be more effective by building new and improving existing internal tools related to the data warehouse.
- **Web Development:** Building the production backend in Python using tools like pdb, pytest, and pylint. Actuating the team vision with AWS services and Apache projects such as S3, Redshift, Athena, Spark, mostly related to cloud computing and distributed systems.
- **Engineering Reliability:** Improving reliability by developing thorough and precise Pytest unit tests using test doubles for every feature developed for the continuous integration pipeline. Delivering consistent results in accordance with the team and company schedule involving cross-functional teams.

### 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.
- **Machine Learning:** Enhanced business productivity by building an analytics dashboard and data visualizations. Analyzed business success models and offered strategic planning with Machine Learning libraries.

## 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 database, data flow, application layers, and component interaction. Built flexible and expressive interfaces and abstractions to enhance reusability and adaptability.
- **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 84% 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, Tensorflow, Bootstrap, Linux, Bash, Firebase, MongoDB, Amazon Web Services, Apache Server, Azure, Spark, React.js, Node.js, Express.js.
- **Core Skills:** Software Architecture, System Design, Agile Development, Organizational Leadership, Data Analytics, Object Oriented Programming, Distributed Systems, Cloud Computing, Machine Learning, API Development.