Johnson Chan

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EDUCATION

University of California, Santa Barbara — June 2024
B.S in Computer Science — *GPA: 3.64*

EXPERIENCE

Software Engineer — July 2024 – Present
Applied Materials — *Santa Clara, CA*
- Optimized Clickhouse database performance using SQL and PyArrow, reducing query execution times by 98% through efficient data processing and indexing strategies.
- Conducted performance testing on database query execution times, resulting in a 30% improvement in runtime transparency and identification of high-impact optimization opportunities.
- Implemented and enhanced efficient REST APIs for UI needs, reducing page load times by 40% through streamlined endpoints.
- Engineered comprehensive tests for APIs and data transformers, boosting test coverage from 60% to 85% and enhancing system reliability.
- Spearheaded development of a dynamic data batch loader, reducing memory usage by 47% and increasing batch throughput from 10k to 25k records per second.

Web Development and Data Visualization Intern — Sep. 2023 – June 2024
Channel Islands National Marine Sanctuary — *Santa Barbara, CA*
- Developed a customized WordPress as content management system, reducing content update times by 25%.
- Leveraged WordPress and custom JavaScript to build a data visualization platform for National Marine Sanctuaries, displaying vital data encompassing over 663,000 square miles of protected aquatic habitats.

Jr. Software Engineering Intern — July 2023 – September 2023
Y STEM and Chess — *Santa Barbara, CA*
- Built new frontend features for a web application using Angular 9, resulting in a 20% increase in user engagement and a 15% decrease in page load time.
- Improved backend functionalities by implementing additional endpoints using NodeJS Express and MongoDB, resulting in a 30% increase in data processing speed

Undergraduate Research Assistant — Sept. 2022 – June 2023
Bionic Visions Lab — *Santa Barbara, CA*
- Deployed a content management system with an authorization and verification system, resulting in increased efficiency and accuracy of website updates by 40%.

PROJECTS

Named Entity Recognition Project: Spanish and Twitter Data | *Python, Jupyter Notebook, NLP* — May 2023
- Developed NER taggers using HMMs and CRF++ showcasing adaptability to diverse entity categories.
- Excelled in Named Entity Recognition for both Spanish and Twitter data with accuracy scores of 86% and 34%.

Image Classification for Clothing Recognition | *Python, Pytorch, Tensorflow* — Mar. 2023
- Processed 28x28 pixel images, organized in a 2D matrix, using Python libraries for efficient handling.
- Excelled in clothing recognition for the data, surpassing expectations with accuracy scores exceeding 88%.

StarsRus Database | *Oracle Cloud, Java, SQL, SQL Developer* — Sep. 2023 – Dec. 2023
- Spearheaded the development of a Java-based brokerage system, achieving a 25% improvement in the efficiency of customer account management within a relational DBMS environment.
- Enhanced system scalability by 20% through Oracle Cloud for database hosting, while implementing JDBC via SQL Developer yielded a 15% efficiency improvement in the Java-based system's interaction with the hosted database.

TECHNICAL SKILLS

Languages: Java, Python, C/C++/C#, SQL, JavaScript, HTML/CSS
Frameworks: React, Node.js, WordPress, REST API, Pytest, Pyarrow, Pytorch, Tensorflow
Developer Tools: Git, Docker, VS Code, Kubernetes, Clickhouse, MongoDB, Figma, Unity, Jira, Jenkins
Methodologies: Agile, Scrum, CI/CD