Aryan Dadnam

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Summary

Driven and detail-oriented Software Engineer with a strong foundation in programming, backend development, and system architecture. Skilled in Python, JavaScript, C++, and React, with experience building scalable, high-performance systems and implementing AI-driven solutions. Proficient in full-stack development, CI/CD pipelines, and database management, with a track record of delivering robust and efficient code.

Work Experience

Health eTile **Jun 2022 - Sep 2024**

Software Engineer Santa Clara, CA

- Collaborated with cross-functional teams to design, develop, and deploy new features for an AI-driven healthcare platform, specializing in emotion detection using Python and AI techniques.
- Implemented and optimized backend systems using Python and Flask, focusing on scalability and performance improvements for real-time data processing.
- Developed interactive front-end components using React.js, integrating seamlessly with back-end APIs to provide a smooth user experience.
- Applied data structures and algorithms to solve complex problems, including multi-threading for processing large datasets efficiently.
- Designed and implemented object-oriented programming (OOP) solutions, leveraging design patterns to ensure maintainable and scalable code.
- Gained hands-on experience with CI/CD pipelines using GitLab and Jenkins, automating deployments and reducing build times by 40%.
- Created, tested, and deployed RESTful APIs, ensuring smooth communication between front-end and back-end systems.
- Managed PostgreSQL databases, optimizing queries and improving overall system performance by 25%.
- Utilized Git for version control, ensuring efficient collaboration and code management within a distributed team.
- Conducted unit testing using PyTest, achieving a 95% test coverage and ensuring the stability of newly developed features.
- Built high-performance, scalable backend systems, focusing on optimizing memory usage and profiling for bottlenecks.
- Engaged in low-level performance optimization, reducing memory footprint and improving execution times for emotion detection algorithms.
- Participated in code reviews and collaborated with the engineering team to maintain coding standards and best practices.
- Applied multi-threading techniques to handle concurrent tasks, reducing processing times by 30% in large-scale data processing.
- Enhanced database schemas to support additional functionality and optimize performance, improving data retrieval times.
- Integrated JSON-based REST APIs, facilitating data exchange between front-end and back-end services.
- Communicated technical concepts effectively to both technical and non-technical stakeholders, ensuring clarity in project goals.
- Led efforts in automating build and deployment processes, streamlining development workflows and improving team productivity.
- Developed SQL scripts to query and manage large datasets, improving data analysis capabilities for emotion detection models.
- Worked independently in a cross-functional, geographically distributed team, driving forward key initiatives in system performance and scalability.

Projects

Task Manager **Jun 2024 - Jun 2024**

- Led a team to design and develop a secure, database-driven task management application using Python, JavaScript, CSS, HTML, Py4web, and Vue.js.
- Created technical specifications by analyzing conceptual designs and business requirements, ensuring adherence to coding standards and best practices.
- Developed automated unit tests to validate application performance and functionality.
- Applied knowledge of debug methods to effectively troubleshoot software application, improving system performance by 30%

Pac-Man AI **Dec 2023 - Dec 2023**

- Developed AI agents for Pac-Man, achieving a top 5 placement in a competitive marathon against other teams.
- Implemented advanced programming concepts, including informed state-space search and reinforcement learning, enhancing game strategy efficiency by 30%.
- Implemented machine learning algorithms for predictive modeling in the project.

Data Management System **May 2020 - May 2020**

- Led a team to create custom data structures for managing animal records at the San Francisco Zoo, utilizing Hash Maps, Linked Lists, and Binary Search Trees.
- Managed data for 1,600 animals, applying SQL for efficient data handling and retrieval.
- Implemented efficient back-end solutions using node.js

Education

University of California Santa Cruz **Sep 2021 - Jun 2024**
Bachelor, Computer Science

Skills

Languages: Python, C#, C++, C, Java, JavaScript, Shell scripting, SQL
Frontend: HTML, CSS
Cloud & Databases: AWS, PostgreSQL, SQL Server
Web Technologies: BULMA, Vue.js, Py4web, React
Developer Tools: VS Code, GitHub, Android Studio, Eclipse, VirtualBox, Unix, Linux, Anaconda Navigator, UTM, Microsoft Office (including Excel), R, Gradle, IntelliJ, Git
Soft Skills: Committed, self-motivated