PARMVIR SINGH

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VALUE PROPOSITION STATEMENT

Motivated Software Engineer with a solid foundation in software development and a passion for learning emerging technologies. Skilled in building robust web applications and APIs with a focus on quality, security, and scalability. Strong experience collaborating with cross-functional teams and delivering reliable, high-quality solutions that enhance user experience.

SKILL

Programming Languages: Python, C/C++, JavaScript, SQL, HTML, CSS
Frameworks/Tools: Git, React, Node.js, RESTful APIs, pytest, CI/CD
Embedded Systems: ARM Cortex, RTOS, Raspberry Pi, Sensor Integration
Development Practices: Agile, Scrum, Test Planning, Roadmap Development, Cross-functional Collaboration
Other: Leadership, Problem Solving, Troubleshooting, Technical Documentation

EMPLOYMENT HISTORY

Software Engineer, HCL Technologies | Google January 2023 — Present

- **Demonstrated** a 30% reduction in application crashes by diagnosing and resolving critical bugs and achieved a 95% customer satisfaction rate by utilizing root cause analysis, addressing user feedback, and cross-functional collaboration.
- **Designed** and implemented RESTful APIs, ensuring secure and efficient data flow between client-side applications and back-end services.
- **Streamlined** backend data processing for Google Nest applications by designing and implementing secure APIs, resulting in a 30% improvement in data flow efficiency.
- **Implemented** CI/CD pipeline optimizations, reducing time to market by 20% and cutting deployment errors by 30%, resulting in faster and more reliable software updates for Google Nest speakers.
- **Developed** and maintained detailed technical documentation for Google Nest speaker software, including system architecture diagrams, design specifications, and user guides, facilitating smoother development processes and aiding in troubleshooting and feature implementation.

Program Manager, HCL Technologies | Google January 2022 — present

- **Developed** and executed bug triage strategies, reducing bug resolution time by 20% (from 10 days to 8 days), leading to faster software releases and improved product stability.
- **Led** development for Google Nest products, driving 12 major firmware updates over 18 months, enhancing performance and expanding functionality for over 500K users.
- **Integrated** new technology solutions by streamlining engineering, QA, and product management efforts, reducing operational costs by 25% and resolving 4,000+ bugs, improving product reliability and efficiency.
- **Managed** 5 platform upgrades and 2 migrations, minimizing user impact and ensuring smooth transitions for new features, achieving over 500,000 users successfully migrated with minimal disruption.
- **Bridged** the gap between technical and non-technical stakeholders, presenting project updates, metrics, and KPIs to senior management, demonstrating the impact of bug management strategies and platform improvements.

Embedded Systems Engineer, Network Sound October 2020 — January 2022

- **Developed** end-to-end web solutions using Django, React, and PostgreSQL, enhancing user satisfaction and engagement.
- **Engineered** user interface components using HTML, CSS, and JavaScript to enable seamless frontend control of audio systems, utilizing Git for version control to track changes and ensure efficient collaboration.
- **Integrated** backend functionalities using C/C++ to handle analog-to-digital conversion and audio system control logic, while conducting thorough testing and debugging to identify and resolve frontend and backend issues promptly.
- **Programmed** a GUI using Windows API in C/C++, reducing test run time by 45 seconds per test, improving testing efficiency by 20% across development teams.
- **Developed** and maintained a Django-based e-commerce website with PostgreSQL, improving database query efficiency by 30% and enabling seamless transactions for 1,000+ customers.
- **Executed** programming best practices in embedded system development, reducing code-related bugs by 30% over 12 months, using C/C++ and real-time operating systems (RTOS) on ARM Cortex microcontrollers.

PROJECTS

Recommendation System

- Utilized rank-based and collaborative filtering-based systems, along with intricate strategies such as user-based and item-based approaches, to enhance recommendation accuracy.
- Incorporated matrix factorization techniques, leading to a 25% reduction in recommendation errors and a 15% improvement in system performance.
- Presented precise conclusions while offering actionable insights critical for refining the effectiveness of the recommendation engine in a business setting.
- Integrated user feedback and iterative improvements to continuously enhance the relevance and effectiveness of the recommendation system.
- Evaluated the effectiveness of various recommendation strategies through experimentation and A/B testing methodologies.
- Demonstrated expertise in data preprocessing, featuring engineering, and model evaluation techniques as part of the recommendation system development process.

EDUCATION

California State University, Sacramento | *Bachelor of Science in Computer Engineering*

- President of Sacramento Sikh Society: Led and organized various community events and initiatives, fostering cultural awareness and inclusivity.
- Member of the Society of Women Engineers: Engaged in networking and professional development opportunities, promoting diversity in engineering.

MIT Schwarzman College of Computing | *Data Science and Machine Learning Certificate*

- ***Mit Data Science And Machine Learning: Making Data Driven Decisions Certification***
- Focused on data-driven decision-making and scalable systems, aligning with fintech solutions.