RAJ D KALE

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EDUCATION

University of Southern California – Los Angeles, US   August 2024-Present
Master of Science in Computer Science
- Algorithms, Advanced Algorithm Design, Web Programming, Database Systems, Cryptography, Machine Learning

Army Insitute of Technology – Pune, India   August 2019-May 2022
Bachelor of Engineering in Computer Engineering | CGPA: 9.22
- Theory of Computation, Discrete Mathematics, Web Technology, Software Arch and Design, Distributed Systems

PROFESSIONAL EXPERIENCE

Payference, Software Engineer - Sunnyvale, California, US (Remote)   June 2022-June 2023
- Programmed the frontend for financial solutions, including payroll processing, ACH/card payment gateways, and graph insights, leading to a 20% increase in user engagement
- Enhanced frontend performance, achieving a 15% improvement in overall application speed through optimized code caching techniques; minimized redundant re-renders and boosted response times during high-traffic periods
- Designed custom reusable components, decreasing code redundancy by 30% and increasing maintainability
- Integrated Twilio for live audio communication, managing call state with Redux, achieving 95% synchronization accuracy, and ensuring dependable real-time interactions
- Collaborated in sprint planning and daily standups, ensuring on-time delivery of functionalities

Payference, Software Developer Intern - Sunnyvale, California, US (Remote)   August 2021-April 2022
- Wrote functionality to generate multiple invoices from a single Excel sheet, cutting API call overhead from $O(n)$ to $O(1)$. The optimization cut-down latency by 40% and page load time by 30%
- Designed and implemented dynamic filters, enhancing user experience by 20%, while maintaining application state through Redux by crafting reducers and actions
- Authored and executed Cypress test cases, boosting application stability and improving performance issue detection accuracy by 35%, alongside a 20% reduction in failure rates
- Acquired proficiency in Git version control, including commit squashing, branch merging, and deploying hotfixes efficiently

ACADEMIC PROJECTS

ServiceEasy – www.serviceeasy.in   November 2024-December 2024
- Devised a scalable web application, streamlining electronic device repair workflows for customers, employees, managers, and administrators, decreasing processing time by 40%
- Leveraged Node.js, Express.js for backend, and Handlebars.js, JavaScript, HTML and Leaflet.js for a dynamic experience
- Integrated Stripe for secure payment processing and SendGrid for automated email notifications, facilitating over 100 transactions daily
- Utilized MongoDB Atlas for data management and applied security measures using bcrypt.js, crypto, and xss

Finerv - www.finerv.in   May 2023-April 2024
- Developed a financial product to automate GST invoice management for businesses, accelerating invoice processing by 35%
- Reduced business cost by 80% & optimize data processing by implementing bulk data import functionality
- Architected web solutions employing a tech stack comprising React.js, Redux for state management, Flask for the backend, and SQL Database for data storage

Supply Chain Management using Blockchain - [github](#)   January 2022-May 2022
- Addressed the lack of transparency in COVID vaccine supply, where 70% US population lacked trust in the vaccine
- Developed a solution leveraging Ethereum blockchain. The system handled over 75 transactions daily with zero reported breaches during its pilot phase
- Engineered a decentralized app (dApp) using React.js for the frontend, Cloud Firestore for real-time synchronization, and Moralis for blockchain integration, strengthening system transparency and security

SKILLS

Languages: C, C++, Python, Java, Dart, JavaScript, Typescript, jQuery, HTML, CSS
Database: Firebase Cloud, Mongo DB, Mongoose, Postgres SQL
Frameworks and Libraries: React js, Redux, Angular js, Next js, Express js, Node js, Spring Boot, Flutter, Bootstrap, Git, Cypress