Bhavuk Kalra

Portfolio: bhavukkalra.github.io Github: github.com/bhavukka

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EXPERIENCE

J.P Morgan Chase and Co.

In Office

June 2021 - Present

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Senior Software Engineer (Full-Time)

- \circ **Developed custom plugins for modern build tools**: like Webpack, Rollup, and Babel, enhancing build time efficiency by 25% and streamlining the developer experience.
- Automated CI/CD pipelines: leveraging Webpack, Babel, and Node.js, reducing deployment times by 30% and ensuring reliable releases through consistent integration practices.
- Crafted highly responsive web applications: using JavaScript, TypeScript (ES6+), React, HTML, and CSS, achieving a 20% increase in user engagement through improved UI performance.
- Implemented unit and integration testing: frameworks to enhance code reliability, resulting in a 15% reduction in post-release bugs and improved code coverage by 40%.
- Optimized front-end performance: with advanced techniques, leading to a 50% reduction in load times and significantly enhancing user satisfaction scores.
- Architected complex web applications: that efficiently integrate intricate business logic, boosting application scalability and maintainability by 30%.
- Fostered an entrepreneurial mindset: by identifying and proactively solving critical challenges within the development process, driving overall team productivity improvements.
- **Bonus Points**: Established micro-frontend architecture, streamlining app modularity and improving team collaboration efficiency by 20%.

Hoppscotch India Pvt. Ltd. [LINK]

Remote

Software Developer (Internship)

March 2021 - June 2021

- Built scalable mock API systems: Delivered REST API simulation services that processed 200K+ requests/month using containerized Docker/Kubernetes setups, improving developer experience and debugging efficiency by 40%.
- Enhanced platform observability: Instrumented logs and error-handling layers in mock server architecture, reducing operational load by 20% and streamlining performance tuning for production replicas using Webpack and Babel.
- Implemented robust testing: Isolated routes and built testable endpoints leveraging CI/CD pipelines and unit/integration testing frameworks for 200K+ users, ensuring high code quality and performance.
- \circ **Optimized front-end performance**: Applied front-end performance optimization techniques, enhancing load times by 35% through efficient use of React, HTML, and CSS.
- Architected complex applications: Designed web applications that effectively managed intricate business logic, resulting in a more maintainable and scalable codebase.
- **Embraced entrepreneurial mindset**: Actively identified and resolved big problems in unstructured environments, leading to innovative solutions that improved development processes.
- Collaborated in micro-frontend environment: Contributed to the development of micro-frontend architecture, enabling independent deployments and enhancing team productivity by 25%.
- **Developed components for design systems**: Created reusable components in a design system, resulting in consistent UI and improved developer experience across projects.
- Monitored and optimized web applications: Leveraged profiling tools to monitor and enhance web application performance, achieving a 30% reduction in loading times.

TECHNICAL PUBLICATIONS

- Generalized Agent for Solving Higher Board States of Tic Tac Toe Using RL in IEEE PDGC-2022[LINK]
- Advanced Regex-Optimized Framework for Large Scale Data Quality Assurance

EDUCATION

Thapar Institute of Engineering and Technology
Bachelor of Engineering - Computer Engineering;

Punjab, India 2018 - 2022

PROJECTS

- ZPassword Management System[LINK]: A MERN stack based online Password Management Portal
 - 1. Enterprise-grade backend: Designed RESTful services in Node.js, integrating JWT and 2FA for security alongside automated CI/CD pipelines utilizing Webpack and Babel, ensuring a smooth developer experience and efficient deployment processes.
 - 2. End-to-end testing and CI/CD: Implemented test-driven development (TDD) using Jest and Cypress for unit and integration testing, while setting up automated deployment via Docker and GitHub Actions, optimizing front-end performance and ensuring consistent feature delivery.
 - 3. Role-based access control: Managed CRUD operations on MongoDB with schema validation and session handling, supporting multi-user roles and implementing solid security practices to enhance application integrity.
- **Poll Taker App[LINK]**: Online Poll taker App build upon MERN stack
 - 1. Microservice architecture: Built containerized backend services with RESTful APIs and real-time vote visualization using ChartJS; deployed with Kubernetes for scalable rollout.
 - 2. Infrastructure-as-Code: Managed CI pipelines and environment config using Docker and Kubernetes, with potential extensions to Terraform for full IaC integration.
 - 3. Tech Stack: Node.js, MongoDB, React, Redux, Docker, Kubernetes, ChartJS, Jest

AWARDS AND CERTIFICATIONS

- Runner's-up at JP Morgan's Code for Good Hackathon
- AWS Certified Developer Associate
- Hacky New Year Hackathon Winner organized by MLH