AISHWARYA RAO KALLEPU

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Summary

Full Stack Developer with 3+ years of experience building robust, scalable, and well-tested web applications. Proven expertise in Ruby, JavaScript, and React, with a passion for clean code, iterative development, and delivering user-friendly solutions. Adept at building end-to-end features in MVC architectures, optimizing relational databases (PostgreSQL), and integrating APIs across cloud platforms (Heroku). Strong advocate of Agile, test-driven development (TDD), and collaborative problem-solving.

Technical Skills

- Languages: Ruby, JavaScript, TypeScript, Python
- Frameworks/Libraries: Sinatra, React, Node.js, MVC, Sequel ORM
- Testing: RSpec, Jest, Mocha, TDD/BDD, Page Object Model
- Databases: PostgreSQL, Elasticsearch, MongoDB
- DevOps/CI-CD: Heroku, Git, CircleCI, Docker, Jenkins
- Tools: WebSockets, REST/JSON APIs, XML, CSV, YAML, Prometheus, Terraform
- Methodologies: Agile, Scrum, Pair Programming

Professional Experience

Graduate Research Assistant *University of South Florida, Tampa, FL • Aug 2023 – Present*
- Designed and implemented end-to-end features for web-based tools using Ruby (Sinatra) on the backend and React.js on the frontend, following MVC architecture.
- Created and maintained RESTful APIs with JSON response formats, enabling third-party integrations and internal tools to sync data in real time.
- Optimized PostgreSQL queries, achieving up to 60% reduction in API response time for high-traffic endpoints.
- Managed background jobs and scheduled tasks with sidekiq, ensuring smooth execution of asynchronous processes.
- Deployed updates via Heroku pipelines, with continuous integration configured in CircleCI.

Research Assistant – Bioengineering Department *Moffitt Cancer Center, Tampa, FL • May 2024 – July 2024*
- Engineered back-end automation using .NET C# and scheduled Ruby tasks, streamlining student application workflows and saving 15+ manual hours/week.
- Built a lightweight task tracking UI with JavaScript, consuming internal REST APIs to provide real-time feedback for support agents.
- Integrated PostgreSQL as the backend with views, triggers, and materialized queries to support analytics dashboards.
- Collaborated with 4 developers in agile sprints, conducting peer reviews and pair programming sessions.

Undergraduate Software Developer Intern – IT Projects *KITS, Warangal, India • Jul 2019 – May 2021*
- Migrated legacy Python-based workflows to modular Ruby microservices, reducing technical debt and improving maintainability.
- Refactored integration logic for music metadata ingestion pipelines, leading to a 25% faster data sync across external APIs.
- Implemented feature toggles and config-driven deployment pipelines using Heroku and Git branching strategies.
- Created intuitive admin dashboards using HTML, CSS, and JavaScript to enable non-technical staff to manage backend jobs.

Education

Master's in computer science
University of South Florida — 08/2023 - 05/2025 | Tampa, Florida, USA
Bachelor of Engineering in Computer Science
Kakatiya Institute of Technology and Sciences, Warangal — 08/ 2019 - 07/2023 | Waranagl, India

Projects

Digital Music Metadata Manager (Personal Project)
- Developed a web app to manage, export, and search audio metadata using Sinatra, PostgreSQL, and Elasticsearch.
- Enabled Excel, CSV, and XML exports of track data with customizable filters and schema mapping.
- Used WebSockets for real-time progress updates during large file exports.

Internal Ticketing Dashboard (Research Project)
- Built a Kanban-style workflow UI in React consuming REST APIs written in Ruby, supporting drag-drop updates and inline editing.
- Implemented JWT-based auth, role-based access control, and test cases using Jest and RSpec.