

Hamza Ahmad Saddal

Lahore 54000, Pakistan

contact@hamza-saddal.com

<https://www.linkedin.com/in/hamza-saddal/>

+92-333-860-6280

EXECUTIVE SUMMARY

Senior Backend Developer with over **6+ years** of experience in **Ruby on Rails, Python** and **JavaScript frameworks**, specializing in scalable backend solutions. Proficient in Agile and DevOps, with a proven track record in leading teams to deliver high-performance software. Known for producing reliable, scalable code and driving innovation in collaborative environments.

TECHNICAL PROFICIENCIES

Languages & Frameworks: Ruby on Rails, Python, OpenClinica, Unit Testing, Webpacker, Hotwire Turbo, jQuery, Stimulus.js, JavaScript, React.js, Next.js, GraphQL, REST API, HTML, CSS, Tailwind CSS, Material UI, Bootstrap

Database: SQL, PostgreSQL, MySQL, NoSQL, MongoDB, Redis

DevOps & infrastructure: Docker, Kubernetes, AWS Services (including EC2, S3, RDS, Lambda), Heroku, GCP, Kafka, Sidekiq

Testing & CI/CD: RSpec, Capybara, FactoryBot, Cypress, CircleCI, Jest, GitHub Actions

Tools: GitHub, Google Analytics, New relic, Sentry, Grafana, Twilio, Sendgrid, Cloudflare, Stripe, Shopify, Figma, Jira, Confluence, LogRocket, Datadog, Rollbar, Notion, RabbitMq

CAREER EXPERIENCE

Partyfer

Senior Software Engineer

Nov 2024 – Present

- **AI System Design (RAG-based Search):** Architected and implemented an AI-powered package selection system using Retrieval-Augmented Generation (RAG) with OpenAI. Enabled users to discover packages through natural language queries, improving search relevance and reducing manual filtering effort.
- **AI Backend & APIs:** Designed backend APIs to process user queries and convert them into structured SQL filters. Built prompt pipelines to return both machine-readable outputs and human-readable responses, enabling seamless frontend integration.
- **AI Worker & Automation:** Developed asynchronous AI workers using Sidekiq to handle classification, tagging, and recommendation tasks. Implemented retry mechanisms, logging, and failure handling to ensure the reliability and scalability of AI workflows.
- **Search & Performance Optimization:** Engineered efficient querying strategies for complex filtering (city, services, event types). Reduced response times through ActiveRecord optimization, indexing, and Redis caching, improving overall system performance.
- **Recommendation Engine:** Implemented AI-driven recommendation logic combining user intent + rule-based filtering, enhancing package discovery and user engagement.
- **System Scalability & Maintainability:** Improved backend architecture for scalability by introducing modular service patterns, background processing, and optimized data flow for high-traffic scenarios.
- **Collaboration & Delivery:** Worked closely with product and frontend teams to deliver user-centric features, ensuring smooth integration of AI capabilities into the platform.

Cribble Tech

Senior Software Engineer

Mar 2023 – Oct 2024

Project: Belle Cares

- **System Architecture:** Led the architectural redesign of the CareLink Scheduling application, improving scalability, maintainability, and overall system structure.
- **Multi-Tenancy Implementation:** Designed and implemented a multi-tenant architecture, enabling SaaS capabilities for multiple healthcare providers within a single platform.
- **Clinical Research Platform:** Developed and enhanced features for the **OpenClinica** platform, supporting electronic data capture (EDC), clinical trial workflows, and secure research data management.
- **Healthcare Integrations:** Built and maintained RESTful APIs and integrations to streamline clinical data exchange between OpenClinica and external healthcare systems.
- **Data Validation & Automation:** Developed automated data validation and quality check scripts using Python, improving data accuracy and reducing manual verification efforts.
- **Performance Optimization:** Optimized complex SQL queries and database interactions, reducing API response times by approximately 40%.
- **Background Processing:** Built and managed asynchronous job processing using Celery, improving system responsiveness and minimizing user wait times.
- **Observability & Monitoring:** Integrated New Relic and Datadog for performance monitoring, logging, and error tracking, enhancing system visibility and reliability.
- **Security & Access Control:** Implemented Role-Based Access Control (RBAC) to enforce fine-grained permissions and strengthen application security while ensuring secure access to sensitive clinical data.
- **Regulatory Compliance:** Contributed to the development of secure and auditable workflows aligned with healthcare and clinical research compliance requirements.
- **Real-Time Features:** Developed a real-time analytics dashboard using WebSockets and Turbo Streams for live data updates and insights.

Project: Posiwise

- **Microservices Architecture:** Architected and implemented a microservices-based system using Kafka and Redis for event-driven communication.
- **System Migration:** Led the migration from a monolithic Ruby on Rails application to a scalable microservices architecture, improving system flexibility and scalability.
- **API Optimization:** Integrated GraphQL APIs to optimize data fetching, reduce over-fetching, and enhance frontend performance.
- **Rate Limiting & Stability:** Implemented custom rate-limiting mechanisms to prevent API abuse and ensure system stability under high load.
- **DevOps & CI/CD:** Built and maintained automated deployment pipelines using Docker, Kubernetes, and GitLab CI/CD, improving deployment efficiency and reliability.

Xprolabs

Ruby on Rails Developer

Dec 2021 – Feb 2023

Project: Interstride

- **Performance Optimization:** Designed and implemented a Redis-based caching layer, reducing database load and redundant queries by approximately 60%.

- **Legacy Refactoring & Upgrade:** Refactored a legacy codebase by modularizing business logic into Service Objects, improving maintainability and code structure. Led efforts to upgrade the Rails version, ensuring compatibility, improved performance, and adoption of modern framework features.

Project: PrizePicks

- **Rails API's:** Contributed to the PrizePicks project by building and maintaining Rails-based APIs that powered a React Native application.
- **Filtering:** Implemented advanced filtering systems for player data and projections.
- **Cashouts:** Developed features including player projections, real-time scoring updates, and cashout systems (v1 & v2).
- **Data Flow:** Ensured seamless data flow between backend services and the mobile app for real-time synchronization and performance.

InvoZone

Frontend Developer

Aug 2019 – Nov 2021

- Developed responsive, user-friendly web applications and reusable UI components using React and modern JavaScript frameworks.
- Collaborated with backend engineers to integrate RESTful APIs, ensuring seamless data flow and efficient communication between frontend and backend systems.
- Built interactive user interfaces with a focus on usability, accessibility, and cross-browser compatibility to enhance user experience.
- Implemented state management, component-based architecture, and frontend best practices to create scalable and maintainable applications.
- Optimized application performance through code refactoring, lazy loading, asset optimization, and efficient rendering techniques, improving page speed and responsiveness.
- Worked closely with designers, product managers, and QA teams to translate business requirements and UI/UX designs into high-quality production-ready features.
- Participated in Agile development processes, including sprint planning, code reviews, testing, bug fixing, and feature deployment.
- Contributed to frontend architecture improvements, reusable component libraries, and coding standards to maintain consistency across projects.

EDUCATION

Bachelors of Science - Computer Science | University Of Lahore, Pakistan