

Muhammad Bilal

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Visa Status: Family Sponsored (Valid until 10-May-2026)



Profile Summary

Full-Stack Developer with 3 years of experience designing and building scalable, high-performance web applications using technologies like Node.js, Express.js, Ruby on Rails, Ruby on Jets, and AWS services. Proficient in front-end development with React.js and skilled in deploying serverless solutions. A strong problem-solver with expertise in developing SaaS applications, serverless big data solutions, and deploying on AWS and Heroku. Currently available in the UAE for immediate joining.

Experience

Software Engineer, Save in Gold — Dubai, UAE

Dec 2024 - Present

- Built a high-performance admin dashboard using React.js and Tailwind CSS, delivering responsive layouts, reusable UI components, and enhanced data visualization.
- Architected and maintained scalable backend services with Node.js and Express.js, implementing secure RESTful APIs with JWT authentication and role-based access control for administrators.
- Designed and integrated BullMQ queues to handle background jobs such as transaction processing, email notifications, and data synchronization, improving system throughput and reliability.
- Implemented real-time user activity tracking using Socket.IO, enabling live updates for admin monitoring dashboards and enhancing system observability.
- Optimized MongoDB performance by redesigning schemas, indexing critical fields, and using the Aggregation Pipeline for complex queries, achieving 45% faster dashboard load times and significantly improving data retrieval efficiency.
- Developed automated reports for gold trades, money transactions, and live transactions using optimized MongoDB aggregation pipelines.
- Deployed and managed cloud infrastructure on AWS ensuring high availability, secure data handling, and scalable performance in production.

Software Engineer, Amrood Labs – Lahore, Pakistan

Sep 2022 – Aug 2024

- Developed and maintained Full-stack web applications using Node.js, Express.js, Ruby on Rails, Hotwire Stimulus JS and React.js, ensuring responsive and scalable performance.
- Designed and implemented RESTful APIs, maintaining code consistency and best practices across multiple projects.
- Optimized background processing using Sidekiq with Redis, improving system performance and task handling efficiency.
- Performed test-driven development (TDD) using RSpec and ActiveRecord, ensuring high-quality code and reducing defects in production.

Projects

E-commerce Microservices System

Oct 2024 – Dec 2024

Designed and developed a scalable e-commerce platform using a microservices architecture, consisting of independently deployed Product, Order, and Auth services. Implemented PostgreSQL with Prisma ORM for efficient relational data management across all services. Built an event-driven workflow using Apache Kafka to ensure reliable communication between services, enabling seamless order lifecycle handling and real-time updates. Integrated a robust order tracking system with event streams and used gRPC for high-performance inter-service communication. Developed the frontend using React for a fast and user-friendly shopping experience and implemented backend services in TypeScript using Node.js and Express.

Tools Used: React.js, Node.js, Express.js, TypeScript, PostgreSQL, Prisma, Apache Kafka, gRPC, Redis, Git

- **DMARCR**
Feb 2024 – Aug 2024
A web application that leverages DMARC, SPF, and DKIM protocols to protect domains from phishing, fraud, and impersonation. Developed by DuoCircle (duocircle.com), this project is continuously expanding and serves a large user base with extensive reporting data. My responsibilities include maintaining the platform and developing new features.
Tools Used: Postgresql, Sidekiq, Sidekiq Cron, AWS EC2, Lambda functions, S3, Terraform, Zoho Billing, CanCan, ActiveAdmin, RSpec, RuboCop, GitLab CLI, Redis
- **BentPixels**
Jan 2023 - Jan 2024
I led the development of a project leveraging serverless big data technologies like Ruby on Jets, AWS Lambda, Redshift, and S3. The goal was to fetch 100+ million YouTube records monthly for each report. We optimized data ingestion into Redshift using S3, benefiting from scalability and cost-effectiveness. Created optimized summaries to enable efficient querying and analysis, extracting valuable insights from the vast dataset. We developed an intuitive Power BI dashboard for interactive data exploration, empowering stakeholders with actionable insights. As the main developer, I delivered a robust solution for large-scale data handling, processing, and visualization. My expertise in serverless architectures and AWS services played a pivotal role in enabling efficient data-driven decision-making.
Tools Used: Ruby on Rails, Ruby on Jets, PostgreSQL, AWS Redshift, S3, Lambda, ActiveAdmin, Swagger, Redis
- **Sludge Reducing Bacteria**
Nov 2022 - Jan 2024
Designed and developed this platform from the ground up, delivering a proven, safe, and effective solution for reducing sludge and optimizing wastewater treatment across lagoons, tanks, lift stations, and aeration basins. The platform features an integrated e-commerce function for purchasing sludge-reducing products and includes a custom-built dosage calculator, which provides accurate dosage recommendations and generates results in a downloadable PDF format.
Tools Used: Ruby on Rails, PostgreSQL, Tailwind CSS, Heroku, ActiveAdmin, SuckerPunch, SendGrid, and WickedPdf, Hotwire, Turbo stream, Stimulus JS
- **News API**
Sep 2024 - Oct 2024
Developed a personal API project using Express.js that includes user registration, authentication, profile updates, and a news management system with full CRUD functionality and background processing via BullMQ. Utilized Prisma for PostgreSQL, incorporating logging, caching, and rate limiting for improved performance and security.
Tools Used: Express.js, Node.js, Node Mailer, BullMQ, Redis

Education

- University of Management And Technology, BS in Computer Science Sept 2018 – Nov 2022
- **GPA:** 3.33/4.0
 - **Final Year Project:** Pakistan Sign Language by using Deep Learning Model. It is a research project in which Deep Learning models are used to solve text translation problems of English to Pakistan sign language and Pakistan sign language to English. The deep learning models covered to achieve translation goals are LSTM, BiLSTM, GRU, BiGRU, and Attention Mechanisms.
 - **Coursework:** Machine Learning, Deep Learning, Cloud Computing

Technologies

Languages: Typescript, JavaScript, Ruby, Java, Python, Golang, C++
Technologies: Node.js, Express.js, React.js, Ruby on Rails, Git, Docker, AWS, PostgreSQL, RSpec, RESTful APIs, GraphQL, Heroku, Stimulus JS, Hotwire, Turbo Rails, ORM, MongoDB, Mongoose, Prisma, MSSQL, MySQL, Redis

Languages

- Urdu
- English