

Umesh Kumar Rajbanshi

Backend Engineer — Python — REST APIs — AWS — Terraform

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Backend-focused Electronics, Communication and Information Engineering graduate with hands-on experience building REST APIs, authentication systems, role-based access control, database-backed applications, and cloud deployment workflows. Strong foundation in Python, Django REST Framework, Go, Node.js/Express, SQL, and Git-based development. Built production-oriented projects involving API design, backend modules, CI/CD pipelines, Docker, AWS deployment, and Terraform-based infrastructure management. Interested in building reliable, secure, and scalable backend systems for payroll, compliance, financial workflows, and cloud-native products.

Technical Skills

- **Languages:** Python, Go, JavaScript, SQL
- **Backend Development:** Django REST Framework, FastAPI, Node.js, Express.js, REST APIs, JWT Authentication, RBAC, Middleware, Error Handling
- **Databases:** PostgreSQL, DynamoDB, MongoDB, SQLite, SQLAlchemy, Mongoose, Relational Database Concepts
- **AWS & Cloud:** AWS Lambda, API Gateway, S3, DynamoDB, EC2, ECS Fargate, ECR, IAM, VPC, CloudWatch, SSM Parameter Store
- **DevOps & Infrastructure:** Docker, Docker Compose, Kubernetes Fundamentals, Minikube, GitHub Actions, CI/CD, Terraform, Linux
- **Testing & Quality:** Unit Testing, Integration Testing, API Testing, Postman, curl, Debugging, Logging
- **Frontend:** React.js, Vite, Tailwind CSS, Axios
- **Tools:** Git, GitHub, VS Code, Linux Terminal

Soft Skills

- **Problem Solving:** Disciplined debugging, root-cause analysis, and structured issue resolution
- **Ownership:** Ability to take assigned backend tasks from implementation to testing and deployment
- **Collaboration:** Comfortable with Git workflows, code review feedback, documentation, and team-based development
- **Learning Mindset:** Actively learning distributed systems, cloud-native development, infrastructure, and backend architecture

Projects

Go Banking API – Backend Banking System

May, 2026 – Present

GitHub: <https://github.com/umess-ss/go-banking>

- Built a backend banking API using Go with a clean project structure following `cmd/`, `internal/`, and reusable package separation.
- Implemented REST API fundamentals including routing, middleware, response helpers, configuration management, and structured backend layers.
- Designed the project around banking-domain concepts such as accounts, protected routes, authentication flow, and account ownership checks.
- Practiced backend architecture patterns including handlers, services, repositories, models, and configuration separation for maintainability.
- Strengthened understanding of financial backend workflows, API correctness, and secure request handling relevant to fintech systems.

RetroX – Restaurant Management System

May, 2026 – Present

GitHub: <https://github.com/umess-ss/restrox-restaurant>

- Developed a full-stack restaurant management system using React, Node.js, Express, MongoDB, and Mongoose with modular backend architecture.
- Implemented JWT authentication, role-based access control, protected APIs, order management, table workflows, menu management, inventory tracking, and billing operations.
- Built REST APIs for real-world business workflows including POS operations, QR-based customer ordering, stock deduction, payment status updates, and staff management.
- Wrote API-level tests and debugged backend issues using curl, jq, logs, and structured manual QA workflows.
- Containerized the application using Docker and configured CI/CD workflows for automated deployment and release consistency.
- Converted existing AWS infrastructure into Terraform code, including ECS/Fargate, ECR, ALB, IAM, SSM Parameter Store, CloudWatch, and related deployment resources.
- Gained practical experience with production concerns such as CORS, environment variables, secrets handling, logging, HTTPS, API routing, and infrastructure safety.

HamroAwaj – Smart City Civic Complaint Platform

Feb, 2026

GitHub: <https://github.com/umess-ss/protobytes-2.0-team--BEI-BEAST->

- Collaborated in a hackathon team to build a civic complaint platform for reporting city issues and tracking resolution status.
- Developed backend APIs using Django REST Framework with authentication, complaint submission, image upload, status tracking, and admin workflows.
- Implemented features for category selection, description handling, location selection, unique complaint ID tracking, and complaint lifecycle management.
- Built admin-facing functionality for viewing complaints, assigning departments/officers, updating statuses, filtering issues, and managing resolution workflows.
- Worked across React, TypeScript, Tailwind CSS, Django REST Framework, and SQLite in a fast-paced team environment.

NStore – Full Stack E-commerce Platform

Jul, 2025

GitHub: <https://github.com/umess-ss/e-commerce>

- Collaborated on a full-stack e-commerce platform using Django REST Framework and React with Vite and Tailwind CSS.
- Developed backend APIs for authentication, product CRUD, cart handling, checkout flow, order processing, user role management, and sales analytics.
- Designed role-based dashboards for Customer, Seller, and Admin users with secure API communication between frontend and backend.
- Implemented relational data workflows around products, orders, users, checkout, and order tracking.
- Integrated frontend state management using React Context and connected UI flows with backend APIs through Axios.

Lightweight ORM System – Python

May, 2026

GitHub: <https://github.com/umess-ss/light-orm>

- Developed a lightweight Object Relational Mapping system from scratch using Python to understand database abstraction internals.
- Implemented model abstraction, SQL query generation, data insertion, querying, and basic filtering operations.
- Strengthened understanding of relational database interaction, backend persistence layers, and how ORMs map application models to SQL operations.

Serenity – US-Nepal Hackathon App

Mar, 2026

GitHub: <https://github.com/umess-ss/US-Nepal-Hackathon->

- Built a Flutter and FastAPI-based mental health support application for mood tracking, journaling, anonymous peer support, and community interaction.
- Worked with a FastAPI backend using SQLite, SQLAlchemy, REST APIs, and WebSocket-based realtime communication.
- Implemented backend service logic for emotional check-ins, sentiment-analysis flow, and structured API communication with the mobile frontend.
- Collaborated in a hackathon team to rapidly prototype a functional app with modular frontend, service, provider, and backend architecture.

Training / Certifications

CloudMandap Fellowship

Mar, 2026 – Present

CloudMandap

- Learning cloud computing concepts with focus on scalable, secure, and reliable application deployment.
- Practicing cloud deployment workflows, infrastructure fundamentals, AWS services, and real-world architecture design for backend applications.
- Strengthening understanding of cloud infrastructure, networking, monitoring, CI/CD, and modern software deployment practices.

AWS Cloud Foundations

2025

ACEM — In collaboration with Prix Academy

- Performed hands-on configuration of core AWS services including EC2, S3, IAM, and VPC.
- Gained practical experience in secure infrastructure setup, resource management, monitoring, and AWS Management Console workflows.

Django Web Development

2025

ACEM

- Developed a foundation in Django MVT architecture, REST API development, authentication, CRUD operations, and database-backed web applications.
- Practiced integrating backend logic with modern frontend interfaces and managing secure application workflows.

React Frontend Development

2025

ACEM

- Learned React component-based development, props, hooks, routing, frontend state management, and API integration.
- Practiced building responsive interfaces and connecting frontend flows with backend REST APIs.

Education

Bachelor of Electronics, Communication and Information Engineering

Advanced College of Engineering and Management (ACEM), Kalanki, Kathmandu

+2 Science

Adarsha Secondary School, Biratnagar

Languages

English, Nepali