

# Ayush Niroula

Full Stack & AI/ML Engineer

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📍 Kathmandu, Nepal

🌐 LinkedIn

## Profile

Full Stack & AI/ML Engineer with 4+ years of experience building scalable platforms and AI-driven solutions for global teams. Skilled in JavaScript, Python, and cloud technologies, with a proven track record of optimizing performance and driving 90% efficiency gains in data pipelines. Passionate about leveraging AI to solve real-world challenges.

## Skills

### Languages

- JavaScript, TypeScript, Python, Go

### Libraries & Frameworks

- React, Next.js, NestJS, FastAPI, Express, Go-Gin, Fastify, GraphQL, gRPC

### Databases

- MongoDB, PostgreSQL, Redis, MySQL

### AI/ML

- TensorFlow, Scikit-learn, OpenAI, Qdrant, Neo4j, Transformers, OpenCV, NLTK, AWS Sagemaker

### DevOps & Cloud

- AWS, GCP, Docker, Kubernetes, GitHub Actions, Prometheus, Grafana, Celery, Kafka, RabbitMQ, BullMQ

## Education

05/2023 – 05/2027

### Bachelor of Computer Science

Taylor's University [🌐](#)

Artificial Intelligence (Major)

Data Science (Second Major)

## Professional Experience

08/2023 – present

Kathmandu

### Lead Engineer

WiseAdmit [🌐](#)

- Developed a scalable **AI Video Interview Platform** (FastAPI, Celery, PostgreSQL, AWS S3) with JWT/SSO authentication, tenant data segregation, media preprocessing, and real-time AI feedback dashboards, supporting over 10,000 concurrent interviews.
- Led the development of an **AI-driven Social Media Risk Analysis** platform, integrating GPT models for content moderation and sentiment classification across multiple networks; built over 15 FastAPI endpoints for real-time reporting, achieving cost savings and 99% uptime.
- Architected a multi-tenant LLM-powered embedding service (Qdrant, Neo4j) and NLP pipelines (NLTK, custom chunking) for semantic search and automated social media scheduling, enabling autonomous AI agents to manage cross-platform interactions.
- Built a MongoDB vector-search service for personalized university/program matching, doubling user engagement and lifting conversion rates.
- Led a team of engineers across Nepal, and USA, collaborating with Product, Design, QA, Marketing, and Recruitment teams to deliver B2C, B2B, and B2U features for over 50,000 monthly active users, and accelerated partner onboarding by 40%.
- Modernized the web client by migrating from Next.js 12 to 14, incorporating edge-rendered components and dynamic imports, which reduced initial load times by 30% and improved Core Web Vitals.
- Overhauled the backend and APIs by refactoring Lead Journey and Applications APIs (Node.js, FastAPI, MongoDB), reducing latency significantly and driving an 18% increase in student conversions.
- Designed a subdomain-based onboarding system that enabled partners to self-provision in under 10 minutes, which boosted white-label deployments by 70%.
- Enhanced security by implementing an Attribute-Based Access Control (ABAC) system, replacing RBAC with dynamic, policy-driven permissions across four user roles, which reduced manual role management by 75%.

- Achieved CI/CD and DevOps excellence by establishing GitHub Actions pipelines with Docker, Kubernetes, canary rollouts, automated tests, and rollback strategies, achieving over 85% deployment success and sub-minute recovery times.
- Designed and led the migration of hybrid cloud infrastructure from AWS US-East to Singapore, reducing round-trip latency by 40% and maintaining 99.9% uptime for APAC/MENA regions.
- Optimized costs by applying autoscaling, spot instances, and database sharding, reducing AWS/GCP spend by 25% while maintaining performance SLAs.
- Enhanced observability and monitoring by deploying Prometheus, Grafana, and AWS EventBridge for comprehensive monitoring and alerting, which reduced Mean Time To Resolution (MTTR) by 30%.
- Built an internal drag-and-drop WhatsApp/email workflow builder with Meta Pixel integration, improving campaign click-through rates by 22% and achieving 3 times faster launches.
- Managed multiple PCI-compliant payment gateways, streamlining checkout flows and improving completion rates.
- Mentored and coached junior engineers, enforced over 80% test coverage, and introduced ESLint/Prettier and branch-based code reviews to boost code quality and delivery velocity.
- Created Apify-based scraping pipelines with robust error handling and PDF reporting, automating 90% of manual university/program data entry.
- Engineered PostgreSQL schemas with Alembic migrations, optimized query performance, and maintained data integrity at scale.
- Designed OpenAPI-compliant FastAPI services with clear documentation, enabling seamless partner integrations and 4 times faster onboarding.
- Implemented centralized logging, custom middleware for performance tracking, and robust error-handling frameworks to ensure 99.9% platform reliability.

07/2022 – 06/2023

### Full Stack Engineer

*Leanq Digital* 

- Reduced website load time by 3 seconds through React optimizations, significantly enhancing user engagement and SEO performance.
- Designed and launched three web applications, successfully meeting business objectives and achieving a 95% on-time delivery rate.
- Developed RESTful APIs with Express.js and PostgreSQL, adhering to WCAG 2.1 standards, which significantly reduced critical accessibility issues.
- Integrated GraphQL to optimize data fetching and improve API flexibility.
- Implemented Agile (Scrum) methodologies to enhance workflows, improving team velocity by 25% through bi-weekly sprints and daily stand-ups.
- Created reusable UI components with React and Tailwind CSS, reducing front-end development time and ensuring consistent brand presentation across applications.
- Set up CI/CD pipelines using GitHub Actions and Docker, reducing manual release steps by 60% and accelerating the deployment process.
- Wrote comprehensive unit and integration tests using Jest and Cypress, achieving 80% code coverage and reducing bug regressions by 50%.
- Built strong relationships with designers, QA, and product managers, enhancing communication and reducing clarification cycles, which streamlined project execution.

06/2021 – 09/2022

### Additional Experiences

#### Hidden Layer Nepal(06/2021-12/2021)

- Full Stack Engineer(Intern)

#### Freelancing(01/2022-06/2023)

- Full Stack Engineer

## Open Source Contribution

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### Eradicate(era)

*Removes output from your project*

- Led the architecture and development of "Eradicate (ERA)," an enterprise-grade static code analysis tool.
- Implemented multi-language support for 7+ programming languages.
- Developed advanced regex-based pattern matching engines for detecting and removing debug statements.
- Utilized Go's goroutines for concurrent file processing, enhancing performance.
- Designed a comprehensive CLI interface using Cobra for flexible tooling.
- Implemented YAML-based configuration management with Viper for easy customization.

- Developed a JSON reporting system for detailed and structured analysis reports.
- Engineered both Go backend and TypeScript-based VS Code extension, showcasing full-stack capabilities.
- Integrated real-time file watchers and interactive dashboards in the VS Code extension.
- Established automated deployment pipelines for streamlined CI/CD processes.
- Contributed to the open-source community, promoting collaboration and best practices.

## Certificates

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- Data Structure And Algorithm In Python [🔗](#)
- Data Scientist Professional [🔗](#)
- Machine Learning Scientist [🔗](#)
- Advanced Deep Learning With Keras [🔗](#)
- AWS Knowledge: Architecting [🔗](#)