

# Rajan Pandey

## Senior Software Engineer

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🏠 Kathmandu, Nepal

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## SUMMARY

Experienced Software Engineer with 4+ years of experience specializing in Python backend development using Django, FastAPI, and cloud-native tools. Proven track record in building scalable systems, automating workflows, and integrating machine learning models. Recognized for delivering high-impact projects like Dalfin and Shikshya, enhancing performance by up to 45%. Strong team leadership, DevOps collaboration, and problem-solving capabilities.

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## KEY SKILLS

- **Languages:** Python, JavaScript, Bash, SQL
- **Frameworks:** Django, FastAPI, Flask, Superset
- **Libraries:** Pandas, NumPy, Scikit-learn, TensorFlow, Keras, PyTorch, Pydantic, Matplotlib, Tortoise ORM, SQLAlchemy
- **Databases:** PostgreSQL, MongoDB, MySQL, Redis, PostGIS, Google BigQuery, SQLite
- **Tools & Platforms:** Docker, Celery, Selenium, Git, GitHub Actions, SQLAlchemy, Alembic, Nginx, VS Code, Postman, Superset
- **DevOps & Deployment:** Heroku, AWS EC2, S3, RDS, Nginx, Uvicorn
- **Concepts:** WebRTC, Django Channels, REST API, JWT, OAuth2.0, Event-Driven Architecture, Workflow Automation, Tenant Models (schema and database level)
- **Soft Skills:** Leadership, Problem-solving, Communication, Agile Development, Mentoring

## EDUCATION

## **Bachelor of Computer Engineering**

National College of Engineering, Tribhuvan University, Lalitpur, Nepal

Oct 2016 – Jan 2021 • Grade: B+

**Achievements:** 3-time merit scholarship recipient

**Projects:** Facial Landmark Detection (Major), Animal Recognition System (Minor)

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## **EXPERIENCE**

### **BrainTip AI — Senior Software Engineer**

Dec 2023 – Present

- Optimized system performance by 45% through raw SQL tuning, binary compilation, and extensive codebase cleanup.
- Integrated Apache Superset dashboards into the Dalfin platform and configured secure OAuth2-based access.
- Enhanced Django and PostgreSQL performance by 15% and reduced manual work by 60% via optimized queries and automation.
- Built a dynamic form builder, BI analytics module, sandbox environment, and drag-and-drop quiz system for the Dalfin platform.
- Created a BERT-based NLP classifier with 92% accuracy and deployed LocalDalfin with secure multi-host architecture.
- Collaborated with DevOps for deployment pipelines and handled advanced system configuration and staging workflows.
- Developed a dynamic workflow engine for process automation using Breadth-First Search (BFS), supporting event-driven triggers, conditional flows, loop structures, task scheduling, and real-time execution.

### **Youth Innovation Lab — Senior Backend Developer and Team Lead**

Jul 2023 – Dec 2023

- Led and managed multiple concurrent projects, prioritizing tasks effectively to meet deadlines.
- Implemented real-time rankings for the quiz system in the Shikshya online learning platform.
- Updated the BIPAD portal, improving performance by 20% through compression, DB aggregation, and caching.
- Developed Django packages for protected media delivery and chunked resumable file uploads.
- Designed and implemented an SSO server for secure user authentication.
- Restructured the TagMe project, improving system performance and reducing load times by 35%.

### **Youth Innovation Lab — Backend Developer and Team Lead**

Dec 2022 – July 2023

- Led a team of 2–4 developers, assigning tasks, monitoring progress, and providing feedback.
- Designed and developed SmartServices for service bookings, access validation, and analytics.
- Designed modular architecture and quiz system for the Shikshya learning platform.
- Optimized database operations in Bipad and TagMe portals, improving query performance and reducing response time by 25%.

## **Mango Software Solutions — Python/Django Developer**

Nov 2021 – Dec 2022

- Designed and developed Election-plus platform using Django with analytics and Redis caching.
- Enhanced Prabhu Bank's intranet and built account opening, digital logbook, and real-time notification systems.
- Delivered WWF ALIGN (NGO) with a dynamic form builder, configuration system, full data validation, and analytics generation using MongoDB.
- Developed account management, budgeting, and reporting modules for University ERP.

## **Blackcoffer Consulting — Data Science Intern**

June 2021 – Sep 2021

- Built automated data scraping pipelines integrated with BigQuery and deployed to Heroku.
- Designed Google Data Studio dashboards for analytics and reporting.
- Contributed to NLP-based research projects involving text mining and classification.

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## **CERTIFICATIONS**

- **IBM Data Science Specialization — Coursera**
- **Neural Networks and CNNs — Coursera**
- **Introduction to Interactive Programming in Python — Coursera**

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## **PUBLICATIONS**

- **"Animal Recognition System Based on CNN" — NJSE Vol I, Issue 08/2020 [Link](#)**