

AYUSH PAL

Python Backend Developer | Backend Software Engineer

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PROFESSIONAL SUMMARY

Software Developer with 2 years of experience building Python backend systems, REST APIs, process automation applications, and AI/ML-integrated pipelines. Hands-on experience with FastAPI, AsyncIO, PostgreSQL/MySQL, SQLAlchemy, Docker, and ReactJS, with ownership across backend, frontend, databases, requirements gathering, testing, and maintenance. Built and maintained 5–6 active internal applications used by 100–200 users across 10–15 departments and automated 5–6 multi-level business workflows.

CORE TECHNICAL SKILLS

Core Backend: Python (Proficient), FastAPI, RESTful API Design, SQL, PostgreSQL, MySQL, SQLAlchemy ORM, AsyncIO

Backend & Engineering: Flask, Microservices, Pydantic, JWT/OAuth, Swagger UI, Redis, Query Optimization, Database Administration

Frontend: ReactJS (Basic/Working Knowledge), Progressive Web Apps (PWA), HTML5, CSS3, Jinja Templates

AI/ML: YOLOv8, Tesseract OCR, spaCy (NLP), OpenCV, Scikit-learn, Pandas, NumPy, Keras, TensorFlow

DevOps & Tools: Docker, Git, Linux, GitHub Actions, Postman, Gunicorn, Uvicorn

Cloud: AWS EC2, Google Cloud Platform, Railway

Other: ERP Management, Process Automation, AI-Assisted Development, Prompt Engineering, Technical Documentation

PROFESSIONAL EXPERIENCE

Junior Software Developer (Python) | Hindustan Gold Industries Pvt. Ltd. | Ahmedabad, Gujarat, India |

April 2026 – Present

- Develop and maintain 5–6 active PWA-based internal applications using FastAPI, ReactJS, and MySQL/PostgreSQL for 100–200 users across 10–15 departments.
- Automate 5–6 multi-level business workflows, including approval flows across Security, HR, Administration, and respective department managers, based on stakeholder requirements.
- Contribute across backend, frontend, database, requirements gathering, testing, and maintenance within a 2–3 person development team.
- Manage production MySQL/PostgreSQL databases, including schema design, query optimization, migrations, and data-integrity operations.
- Handle ERP bug triage and resolution by diagnosing backend issues, patching data inconsistencies, and supporting critical business processes.
- Use Git-based workflows including branching, pull requests, code-review participation, and merge-conflict resolution; perform pytest, unittest, manual testing, and UAT.

Python Backend Developer | Palmdigitalz (Let Us Support Pvt. Ltd.) | Chennai, Tamil Nadu, India |

August 2024 – March 2026

- Developed and maintained 15+ RESTful API endpoints using FastAPI, handling CRUD operations and data processing for production web applications.
- Migrated legacy synchronous endpoints to asynchronous workflows using AsyncIO, reducing API response latency by approximately 35–40% and improving concurrency under load.
- Integrated YOLOv8 object detection and Tesseract OCR models into backend pipelines, automating text extraction from 500+ document uploads daily.
- Wrote and optimized complex SQL queries and utilized SQLAlchemy ORM for PostgreSQL and MySQL, reducing query execution time by approximately 25%.
- Documented API endpoints using Swagger UI and collaborated with ReactJS developers for seamless API integration.

- Performed unit testing and backend debugging, identifying and resolving critical bugs that improved system reliability and uptime.

EDUCATION

Bachelor of Technology (B.Tech) – Computer Science & Engineering

Apollo Institute of Technology, Kanpur, Uttar Pradesh, India | CGPA: 7.62 | Graduated: July 2023

Relevant Coursework: Python Programming, Web Development, Data Analytics, Software Engineering, DBMS, Computer Networks

NOTABLE PROJECTS

AI Resume Parser & Scoring API | *Python, FastAPI, Tesseract OCR, spaCy NLP, OpenCV, Pydantic*

- Built an asynchronous AI-powered REST API that parses PDF and image-based resumes using Tesseract OCR and spaCy NLP, extracting structured candidate information including skills and experience.
- Implemented a resume-to-job-description scoring engine that calculates a match score (0–100) by comparing extracted skills against provided JDs.
- Designed modular routes, services, utils, and models with auto-generated Swagger documentation for integration with recruitment platforms.

High-Performance URL Shortener with Redis Cache | *FastAPI, Redis, PostgreSQL, SQLAlchemy, Docker, Pydantic*

- Built a URL shortening service using a Cache-Aside strategy with Redis, reducing database read operations by approximately 90% and achieving sub-10ms redirect response times.
- Implemented click analytics, error handling, and separated schemas, CRUD, and models for maintainability and scalability.
- Containerized the FastAPI application and Redis using Docker Compose for consistent deployment.

Automated OCR & Data Extraction Pipeline | *Python, YOLOv8, Tesseract OCR, FastAPI, OpenCV*

- Developed an end-to-end PoC using YOLOv8 for document-region detection and Tesseract OCR for text extraction, achieving approximately 85% accuracy on low-quality scans.
- Applied OpenCV preprocessing including adaptive thresholding, noise removal, and deskewing; built a FastAPI backend processing 100+ images per hour.

Customer Churn Prediction REST API | *FastAPI, Scikit-learn, Pandas, Matplotlib, Docker*

- Deployed a machine-learning classification model as a REST API with sub-200ms average response time and containerized it with Docker.
- Performed EDA and feature engineering with Pandas and Matplotlib during model training.

CERTIFICATIONS & TRAINING

- Web Development Trainee – InternShala (Dec 2022 – Mar 2023)
- Python Programming – IIT Kanpur (August 2021)
- Data Analytics Consulting Virtual Internship – KPMG (August 2023)
- Software Engineering Virtual Experience – JPMorgan Chase & Co. (June 2020)

ADDITIONAL INFORMATION

Languages: English (Fluent), Hindi (Native)

Soft Skills: Problem Solving, Backend Debugging, Team Collaboration, Technical Documentation, Agile Teamwork, Stakeholder Communication

Interests: System Design, Backend Optimization, AI/ML Research, Process Automation, Distributed Systems