G PRADEEP KUMAR

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PROFESSIONAL SUMMARY

Software engineer (B.Tech CSE, 2025) who builds backend services and AI applications end to end. Built and deployed three tested, CI-backed projects: an LLM support agent using RAG and tool calling, a fintech verification microservice with resilient third-party integrations, and a computer-vision model optimised for edge deployment. Brings internship experience in backend automation, plus team leadership and customer-facing work from two startups.

WORK EXPERIENCE

Python Developer Intern **Sept 2023 – Dec 2023**
BlendVidya EdTech

- Developed backend features and automation scripts in Python and MySQL to streamline data processing workflows, improving operational efficiency.
- Designed and shipped an end-to-end train ticket booking automation system, reducing manual effort in the booking process.
- Debugged issues and optimized database queries to improve system performance and reliability.
- Collaborated with a cross-functional development team using Git version control in a fast-paced, iterative environment.

Team Lead **Feb 2025 – Sep 2025**
LearnFlu — early-stage startup

- Took full ownership of a team driving product adoption for an AI/ML learning program, breaking down complex engagement and growth challenges into actionable, cross-functional tasks.
- Used performance data to prioritize initiatives and trade-offs, earning recognition as Top ATL (May) and Top Team Lead (July).
- Worked directly with customer stakeholders, leading the negotiations and execution that secured a 5-year institutional partnership with end-to-end ownership.

Assistant Manager – Operations **Oct 2025 – Feb 2026**
Yavhi (Aarde Projects)

- Managed CRM operations end to end, using data analysis to track leads, customer engagement and pipeline health.
- Wrote SQL queries and used Excel to generate data-driven insights that improved conversion rates and informed operational decisions.
- Built dashboards and maintained data accuracy, supporting faster, evidence-based decision-making across the team.

CORE COMPETENCIES

Backend Development & REST APIs | Microservices & System Design | Generative AI (LLMs, RAG, AI Agents) | Machine Learning & Model Evaluation | Database Design | Testing, CI/CD & Deployment | Data Structures, Algorithms & OOP | Debugging & Problem Solving | Cross-Functional Collaboration

CERTIFICATIONS

Tata GenAI Powered Data Analytics Job Simulation — Forage (Verification: 6ac7eb64df29216275787cc9) Oct 2026
Full Stack Developer — One Roadmap Skill Certification (ID: CERT-7C2DC4F2) Oct 2026
React.JS Developer — One Roadmap Skill Certification (ID: CERT-4AC85013) Oct 2026
AI and Data Scientist — One Roadmap Skill Certification (ID: CERT-3656FDA3) Oct 2026

KEY PROJECTS

AI Support Agent – LLM, RAG & Tool Calling (Python, FastAPI, PostgreSQL, Docker)

- Built an LLM-powered customer-support agent as a FastAPI REST API, combining retrieval-augmented generation (RAG) over a knowledge base with tool-calling AI agents that look up bookings, open tickets and escalate to humans.
- Wrote a provider-agnostic layer for the OpenAI and Anthropic APIs with retries, versioned prompt templates and guardrails, plus an HMAC-signed idempotent webhook and LLM document extraction into schema-validated JSON.
- Created an 18-scenario evaluation suite (18/18 passing) and 24 pytest unit tests that gate every merge in GitHub Actions CI; packaged with Docker and Kubernetes manifests.
- GitHub: github.com/PradeepG01/ai-support-agent

KYC Orchestrator – Fintech Verification Microservice (TypeScript, Node.js, PostgreSQL)

- Built a Node.js/Express microservice that calls identity, sanctions and address vendor APIs in parallel, normalises the results and computes a weighted risk score to approve, reject or route cases to manual review.
- Made third-party integrations resilient with timeouts, exponential-backoff retries, caching and idempotency keys, and delivered signed webhooks through a transactional outbox queue with dead-lettering.
- Designed the PostgreSQL schema behind a repository pattern; shipped an OpenAPI spec, structured logs, Prometheus metrics, 29 Jest tests, a Docker image and a CI/CD pipeline.
- GitHub: github.com/PradeepG01/kyc-orchestrator

Defect Vision – Industrial Defect Inspection (PyTorch, OpenCV, ONNX, FastAPI)

- Trained a CNN with OpenCV preprocessing and augmentation reaching 99.75% accuracy and 0.996 macro-F1 on a 4,000-image synthetic surface-defect dataset.
- Added autoencoder anomaly detection trained only on good parts (90.4% defect recall at a 1% false-alarm rate), evaluated with precision, recall and confusion matrices.
- Shrank the model 354 KB to 123 KB with int8 quantization at equal accuracy, exported to ONNX with a parity test and served it through a FastAPI inference API.
- GitHub: github.com/PradeepG01/defect-vision

Shipment Tracking Service (Java 21, Spring Boot 3, Spring Data JPA, PostgreSQL, Docker)

- Built a Spring Boot REST API to book shipments and track them through their delivery lifecycle, using a layered controller–service–repository design, DTO records and Bean Validation for clean, maintainable backend services.
- Modelled shipment statuses as a finite state machine (illegal transitions return 409), added optimistic locking for concurrent updates, @EntityGraph to avoid N+1 queries, and paginated, filterable listing.
- Managed the schema with Flyway migrations on PostgreSQL, returned RFC 7807 problem+json errors, exposed Actuator health probes; covered rules with JUnit 5 and MockMvc integration tests, Maven, Docker and GitHub Actions CI.
- GitHub: github.com/PradeepG01/shipment-tracking-service

EDUCATION

B.Tech, Computer Science and Engineering — Dayananda Sagar University, Bengaluru 2021 – 2025
Pre-University — Deeksha PU College

TECHNICAL SKILLS

- Languages: Python, Java, TypeScript, JavaScript, SQL
- Frameworks: FastAPI, Node.js (Express), Spring Boot, React
- Databases: PostgreSQL, MySQL, MongoDB
- AI/ML: OpenAI & Anthropic APIs, PyTorch, Scikit-learn, Pandas, OpenCV
- Tools & Cloud: Git, Docker, Kubernetes, GitHub Actions, AWS

LANGUAGES

English, Kannada, Telugu, Hindi