


Pradeep Rajput

 pradeep-88

 pradeeprajputofficial

 pradeeprajput.er@gmail.com

 +91-8840822890

WORK EXPERIENCE

Machine Learning Intern

Oct 2023 – Nov 2023

- Developed predictive ML models that increased customer retention accuracy by **22%** and improved campaign response by **18%**.
- Automated data preprocessing pipelines, cutting manual feature engineering effort by **30%**.
- Deployed classification models with **Scikit-learn**, achieving an F1-score of **0.89**.
- Built interactive dashboards in Power BI, reducing reporting turnaround time by **40%**.

Full Stack Developer

Feb 2026 – Present

Prepze

- Built end-to-end web features using **React**, **REST APIs**, and **SQL databases**.
- Developed backend services with clean business logic and request validation.
- Implemented reusable **API-based data processing and reporting pipelines**.
- Optimized performance via **SQL tuning**, **async processing**, and **code refactoring**, improving latency by **25%+**.
- Ensured system reliability using **secure coding**, **error handling**, and **schema validation**.

PROJECTS

MQTT Broker



— *C++, FreeRTOS, Multithreading, ESP32*

Jan 2024 – Feb 2025

- Engineered an MQTT Broker for ESP32/ESP8266 supporting **1,000+ concurrent IoT clients**.
- Optimized message scheduling using **FreeRTOS multithreading**, improving latency by **45%**.
- Built a **Trie-based subscription model** that reduced topic lookup complexity to **O(log n)**.
- Enhanced system reliability through an **event-driven architecture** suitable for large-scale IoT setups.
- Achieved high-throughput benchmarks: **10,000 MQTT messages processed in 7.8 seconds**.

IoT Telemetry Backend System



— *FastAPI, Docker, PostgreSQL, MQTT*

Mar 2025 – Sep 2025

- Developed a containerized IoT telemetry backend using **FastAPI**, **PostgreSQL**, **MQTT**, and **Redis**.
- Created REST APIs for **device registration**, **telemetry ingestion**, and secure data storage via **SQLAlchemy**.
- Designed an async **MQTT consumer pipeline** enabling real-time sensor data processing.
- Deployed services using **Docker Compose** (API, DB, Redis, MQTT Broker) for modular scalability.
- Ensured data integrity using strict **Pydantic validation** and end-to-end ingestion testing.

EDUCATION

SRM University, Andhra Pradesh

Aug 2022 – May 2026

B.Tech. in Electrical & Electronics Engineering

CBSE – Class XII

May 2022 – 85%

CBSE – Class X

May 2020 – 96%

TECHNICAL SKILLS

Languages: Python, JavaScript (ES6+), C++, SQL

Backend Development: FastAPI, Node.js, Express.js, REST API Design

Databases: PostgreSQL, MySQL

Messaging & IoT: MQTT, Mosquitto Broker, Real-time

DevOps / Tools: Git, GitHub, Linux/Terminal, VS Code

Data/ML Tools: Pandas, NumPy, Scikit-learn, MATLAB

SCHOLARSHIPS & ACHIEVEMENTS

- HCL SNF Scholar – Awarded full tuition scholarship.
- Cleared SSB Interview for Officer Entry (Indian Army).
- Secured 2nd place at UDGM Fest; Zonal 3rd in Football Clusters.
- Recognized with ASSET Awards: Creditable (2016), Distinguished (2017).