

# AKASH AGALAVE

Pune, India

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## EDUCATION

### Dr. D.Y. Patil University

*B.Tech - Computer Science and Engineering | CGPA - 8.45*

Dec 2021 - June 2025

Pune, India

### Maharashtra Vidyalaya Barshi

*Higher Secondary Education (Science) | Percentage - 88%*

May 2019 – June 2021

Barshi, India

## EXPERIENCE

### Euron

*AI Developer Intern*

August 2025

Remote, India

- Built an AI-powered **medical chatbot** using LangChain, Pinecone, and OpenAI embeddings.
- Implemented **vector search** for fast and relevant medical information retrieval.
- Developed Flask backend and containerized using **Docker** for scalability.
- Deployed on **AWS EC2** using images from **AWS ECR** with CI/CD automation.

### CodersCave

*Data Science Intern*

May 2024 - June 2024

Remote, India

- Developed a **Spam Classifier** using **NLTK** and ML, achieving **98.7% accuracy** on test data.
- Streamlined text preprocessing, tokenization, and feature extraction for training pipeline.
- Delivered an **F1-score of 0.96** through precision-tuned model evaluation.

## PROJECTS

### FraudGuard – Real-Time Fraud Detection & MLOps Platform | [GitHub](#)

Nov 2025 – Jan 2026

- Designed a **real-time fraud detection platform** for **highly imbalanced financial transactions**, optimized for **low-latency, high-throughput inference** under production constraints.
- Achieved **94.5% PR-AUC**, sustaining **~1.2K RPS** with **P95 < 25 ms** and **P99 < 32 ms** inference-path application latency, measured via **Prometheus** behind an **AWS ALB**.
- Built a **LightGBM** pipeline with advanced **feature engineering** and imbalance handling, ensuring reproducible training via **DVC + MLflow**.
- Deployed a **Kubernetes-based microservices system** on **AWS EKS** using FastAPI, **Kafka**, observability, and accuracy-triggered CI/CD retraining.

### Real-Time YouTube Sentiment Analysis System | [GitHub](#)

Mar 2025 - Apr 2025

- Engineered a **real-time YouTube sentiment analyzer Chrome extension** using fine-tuned **LightGBM** with **TF-IDF** trigram features.
- Attained **86% accuracy** via **Optuna Bayesian** tuning with expanded search space over **50 trials**.
- Resolved **class imbalance** using ADASYN and **LightGBM** class-weight, boosting model performance.
- Deployed scalable **Flask API** on **AWS EC2** with **Docker**, **ECR**, and **CI/CD** via **AWS CodeDeploy** for real-time inference.

### Taxi-Demand-Forecasting-System | [GitHub](#)

Feb 2025 - Mar 2025

- Constructed a real-time **Uber demand prediction** system across NYC neighborhoods using **GradientBoostingRegressor**, trained on a large dataset of **34.5 million Uber trips (Jan–Mar 2016)**.
- Reached **93% accuracy** forecasting **15-min** demand using spatiotemporal features for efficiency.
- Built Streamlit app with **Docker** backend enabling real-time demand queries and maps.
- Deployed scalable **AWS EC2** with Load Balancer, **Auto Scaling**, and CI/CD via **CodeDeploy**.

## PROBLEM SOLVING

- Solved 200+ Data Structures Algorithms problems across LeetCode and GeeksforGeeks, strengthening data structures, algorithms, and problem-solving fundamentals.

## TECHNICAL SKILLS

**Languages:** Python, SQL

**Technologies:** Machine Learning, Deep Learning, NLP, Transformers, Hugging Face

**Frameworks & Libraries:** PyTorch, Langchain, SHAP

**Database:** SQL, Vector Database

**MLOps-Tools:** Git, GitHub, DVC, MLflow, Github Actions, DagsHub, Prometheus, Grafana, kafka

**Deployment & Cloud Services:** FastAPI, Docker, AWS, Kubernetes (EKS)