Akash Agalave

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EDUCATION

Dr. D.Y. Patil University   **Dec 2021 - June 2025**
B.Tech - Computer Science and Engineering | CGPA - 8.45   *Pune, India*

Maharashtra Vidyalaya Barshi   **May 2019 – June 2021**
Higher Secondary Education (Science) | Percentage - 86.85%   *Barshi, India*

EXPERIENCE

Euron   **August 2025**
AI Developer Intern   *Remote, India — Individual project-based*

- Designed and implemented **AI** applications by developing **machine learning models** for a medical chatbot using domain-specific **data**.
- Implemented **vector search** for fast and relevant medical information retrieval.
- Developed backend services and application **systems**, containerized using Docker to support **scalable deployment**.
- Deployed on **AWS EC2** using images from **AWS ECR** with CI/CD automation.

CodersCave   **May 2024 - June 2024**
Data Science Intern   *Remote, India — Individual project-based*

- Developed and trained **machine learning models** on text **data**, achieving **98.7% accuracy**.
- Streamlined text preprocessing, tokenization, and feature extraction for training pipeline.
- Evaluated and optimized **model performance**, delivering **0.96% F1-score**.

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.
- Improved **model performance** to 94.5% PR-AUC, sustaining $\sim$**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 **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, RAG, RAGAS, AI Agents , 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)