Chahat Upadhyay

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Education

Vellore Institute of Technology, Bhopal Sept 2022 – Current
B.Tech. in Computer Science Engineering *CGPA: 8.98*

Kendriya Vidyalaya School May 2022
12th Grade *Percentage: 93.80%*

Skills

Languages & Frameworks: Java, Python, C, C++, SQL, JavaScript, HTML, CSS, Pytorch

Tools & Technologies: Git, MySQL, Gradio, Docker, Google Colab, AWS, Grok, Tensorflow

Soft Skills: Cross-functional Collaboration, Team Leadership, Agile Mindset, Operational Excellence

Projects

Log-Based Error Classification (BERT, LLM, Python) Github

- Architected a hybrid error classification pipeline combining regex parsing, sentence transformer embeddings, and Groq powered LLM (large language model) calls that can process large CSV log entries with 99% uptime.
- Devised an intelligent routing layer that dynamically selected regex for 65% of structured logs, transformer-based models for 30% of mid-complexity entries, and LLM fallback for the remaining 5%.
- Optimized the embedding to the classifier workflow using all mpnet-base v2 vectors and logistic regression to achieve a macro F1 score of 0.98 and an average precision ratio of above 0.99 across five error categories.

R.A.K.T (PHP, MySQL, XAMPP) Github

- Designed and deployed a dual role web portal that supports multiple users, facilitating donor scheduling by 30% through a self-operating booking interface filtering by blood type and pin code.
- Systematized email confirmations and inventory alerts, reducing administrative follow-up tasks and boosting donor engagement by 20% during critical shortage alerts.
- Engineered a synchronized patient request engine leveraging optimized SQL queries and district-level pin code matching to route blood requests in real time, reducing request-to-delivery cycle time by 70%.

Jelly-Fish Classification (VGG16, DenseNet121, Flask) Github

- Developed a transfer learning pipeline on VGG16, ResNet50, DenseNet121, and EfficientNet B0, expanding a 900 image dataset to 3,600 by augmentation and delivering a peak accuracy of 98.40% on DenseNet121.
- Built and containerized a Flask based web UI on Google Cloud, reducing end to end image classification latency by 40% and supporting 500 concurrent research queries per hour.
- Streamlined batch preprocessing through resizing, normalization, and noise reduction achieving a 25% faster training throughput and a 15% improvement in model generalization on unseen translucent species of jellyfish.

Achievements and Certifications

- **TCS Codevita (Season 12, 2025) —** Achieved global rank 249 out of 600,000+ participants across 96 countries, placing in the top 0.05% and advancing through all coding rounds to the prestigious final phase.
- **Oracle Certified Professional (OCP) SE 11 —** Earned in-depth expertise in Java SE 11 through Oracle's official developer certification course delivered on Oracle Cloud.
- **SmartBridge —** Earned 93.90% distinction in AI with Google Cloud, orchestrating a jellyfish classifier using cloud-native MLOps, automated pipelines, and scalable deployment workflows.
- **Adobe Gen-Solve Hackathon (2024) —** Competed in the top 5% worldwide and provided a solution to detect and predict imperfect images drawn by users of different shapes and sizes.
- **NPTEL Cloud Computing and Marketing Analytics —** Ranked in the top 5% among 23,000+ learners in cloud computing and 1,500 + in marketing analytics.

Co-Curricular

- Active competitive programmer with a peak rating of 1268 (Pupil) on Codeforces.
- Initiated and coordinated a campus-wide event to promote entrepreneurial thinking, enabling students to pitch startup ideas and receive peer feedback.
- Led and coordinated blood supply management for hospitals in the village, ensuring timely delivery and positively impacting the healthcare of 70+ individuals through improved access and support.