ADITYA PILLAI

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Education

Indian Institute of Information Technology Design and Manufacturing Kancheepuram — Chennai
CGPA: 9.32/10 *B.Tech (Hons.) in Computer Science and Engineering* — *2022 – 2026*
- **Relevant Coursework:** Machine Learning, Deep Learning, Big Data, Cloud Computing, Computer Vision, Digital Image Processing, DSA, OOPS, DBMS, Operating Systems, Computer Networks and Security

Technical Skills

- **Programming Languages** Python, C, C++, Java, PowerShell
- **Web Development** Flask, NodeJS, ReactJS, MongoDB, SQL, OAuth
- **AI / Machine Learning** Scikit-learn, TensorFlow, PyTorch, Hugging Face, RAG, Agentic AI, MCP
- **DevOps & Cloud** Docker, Terraform, Azure, Jenkins
- **Data Analysis** Power BI, Pandas, NumPy, SQL, Scikit-learn, Excel, Jupyter, Matplotlib, Seaborn, SpaCy

Experience

Accenture — Bengaluru
AEH Intern (Advanced Application Engineering Analyst) *Certificate* — *May 2025 – July 2025*
- Built an **automated cloud capacity monitoring and forecasting system** for a **Fortune 100–scale global insurance enterprise**, enabling proactive alerts across **thousands of cloud subscriptions**.
- Developed **AI/ML-based time series forecasting models** to predict resource tipping points, reducing manual capacity planning and improving operational decision-making.
- Integrated ML predictions into **Azure DevOps workflows** using **Azure Functions and Automation**, and delivered real-time insights through **Power BI dashboards**.
- **Tools & Technologies:** *Python, Pandas, Scikit-learn, Time Series Forecasting, Azure Functions, Azure Automation, PowerShell, Power BI, Azure SQL, CI/CD*

ICAR (Indian Council of Agricultural Research) — Indore
Project Intern *Certificate* — *June 2024 – August 2024*
- Built and deployed a **multilingual domain-specific chatbot** by fine-tuning a **transformer-based NLP model** on a custom-curated dataset.
- Achieved **80% context relevance accuracy** across multiple languages, optimizing query understanding and response quality.
- Applied **model quantization and layer pruning** to reduce model size, enabling **lightweight deployment**.
- Deployed the model on **Windows IIS server**, managing load and latency using batching and asynchronous request handling.
- **Tools & Technologies:** *Python, Transformers, NLP, Machine Learning, Quantization, Pruning, Windows IIS*

KGVK Diagnostics — Chennai, India
AI/ML Intern *Certificate* — *Sept 2025 – Nov 2025*
- Curated and preprocessed **facial image datasets** for medical analysis, ensuring data quality and annotation consistency.
- Developed a **facial disease classification model** to predict disease categories from images using deep learning techniques.
- Integrated **Explainable AI (XAI)** methods to interpret model predictions, improving transparency and clinical trust.
- **Tools & Technologies:** *Python, Deep Learning, Computer Vision, CNNs, Explainable AI (SHAP/LIME), OpenCV*

Projects

DualView BMI — A Machine Learning Based Approach To Dual Perspective Facial Analysis GitHub
- Designed a machine learning system to predict BMI and classify gender using dual-view (front and side) facial images.
- Preprocessed a dataset of **60,000 images** using MTCNN and FaceNet; extracted embeddings and trained XGBoost for regression and classification.
- Achieved **MAE: 0.70**, **RMSE: 2.02**, **R^2: 0.87**, **PCC: 0.92** on dual-view test inputs and outperformed ResNet and MobileNet-V2 by over **2.5× lower MAE** and **30% higher PCC**.
- Developed a **Flask-based web application** for secure image upload, BMI prediction, and result display with user-friendly UI.
- **Libraries/Frameworks used:** *MTCNN, FaceNet, XGBoost, PyTorch, TensorFlow, Flask*

Human Pose Anomaly Detection using STG-NF GitHub
- Built a **skeleton-based video anomaly detection system** to identify abnormal human actions such as **falls and fights**.
- Extracted spatio-temporal pose features using **ST-GCNs**, modeling body posture and motion dynamics.
- Implemented a **Normalizing Flow (STG-NF)** model to compute **log-likelihood scores** for real-time anomaly detection.
- Evaluated on **ShanghaiTech and UBnormal datasets**, achieving an **AUC of 86%**.
- **Tools and Technologies:** *Python, PyTorch, ST-GCN, Normalizing Flows, Computer Vision*

Achievements

- **103rd Rank Nationwide** in Amazon ML Challenge 2025 (Institute Rank 1)).
- **21st Rank Nationwide** Naukri Campus Ring of Honor 2025 (among thousands of student across IIT, NIT, IIIT, BITS)
- **LeetCode 300+ problems solved**, **Views: 5K** (BiWeekly 120 Rank **5540**).
- **CodeChef Global Rank 169** in Starters 200 (Rated).
- **Responsibilities:** Placement Coordinator, Teaching Assistant Machine Learning