ANAGHA SRIKRISHNA
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ACADEMIC QUALIFICATION

Bachelor of Engineering in Computer Science and Engineering, College of Engineering, Guindy, Anna University, Chennai; CGPA - 9.63/10 | Expected: Apr, 2026

PROFESSIONAL EXPERIENCE

Intern Analyst,* Wells Fargo, Hyderabad,** ***June, 2025 - July, 2025

- Designed a decision-support tool leveraging MCP (Model Context Protocol) to enable intelligent reasoning and adaptive automation processing 1000+ queries daily with 92% accuracy.
- Constructed knowledge graphs using Neo4j, NetworkX libraries and GraphRAG framework to extract insights to support authorization of the customers from their feedback and recommend context-aware solutions through dynamic traversal to improve personalization.

Software Intern, Hyperlocal Labs,* Indian Institute of Technology Madras, Chennai** ***Jan, 2024 - Jun, 2024

- Developed a notifier service to notify users of the air quality changes using Python, SQL, and FastAPI via email and Discord
- Implemented APIs along with testing many failure edge cases including situations such as HTTP errors, no Wi-Fi on receiver end, dirty data providing solutions like SSE (Server-Sent Events) for One-Way Event Streams
- Developed the front end for a dashboard (used for Internal monitoring), UI layout, data visualizations through pie charts and line graph to record air quality (from live sensors) using HTML and CSS
- Handled authentication and authorization of an application using Keycloak, managing 500+ user accounts,
  Improved reliability of the system by handing errors efficiently along with retries scenarios and Task Scheduling in FastAPI.

ACADEMIC PROJECTS

Title: CredSecure – Credit Card Fraud Detection App
Duration: Nov'24 – Nov'24; **Team size:** 3
Summary: Created a fraud detection app based on a Random Forest model hosted through Flask to detect fraudulent credit card transactions in real time. The model performed better in terms of accuracy, achieving an accuracy of 93%, recall, and ROC-AUC than XGBoost and Decision Trees models, and is particularly suitable for production environments that deal with imbalanced datasets.
Individual Contribution: Led the feature engineering and model optimization pipeline, incorporated various techniques to manage data imbalance, trained the Random Forest model, and deployed it using Flask for online fraud detection.

Title: Hospital Database Management System
Duration: May'24 – May'24; **Team size:** 3
Summary: Designed and developed an end-to-end database management system for operationalizing hospital processes like patient records, billing, prescriptions, and room assignments. The system maintains data integrity, facilitates quick retrieval, and improves administrative workflow management.
Individual Contribution: Designed the overall database schema, ensured data integrity by implementing stored procedures and triggers, improved query performance, and designed the user interface for easy interaction with patient and administrative data.

PUBLICATIONS

B. L. Velammal, Akshaya Srikrishna, Anagha Srikrishna, and Krishnendu M. R, "Automated Air Pollution Forecasting Using Time Series Models," at 2025 Third International Conference on Networks, Multimedia and Information Technology (NMITCON), Bengaluru, India, 2025, pp. 1-6

A. Srikrishna, A. Srikrishna, K. M. R. and S. Renugadevi, "Spatio-Temporal Analysis of Air Quality Disparities Across Urban and Rural India," 2025 International Conference on Emerging Techniques in Computational Intelligence (ICETCI), Hyderabad, India, 2025, pp. 1-7,

RESEARCH PROJECTS

Title: Automated Air Pollution Forecasting Using Time Series Models
Duration: Jan'25 – Apr'25; **Team size**: 3
Summary: An automatic air quality forecasting system for Chennai created by combining time series modeling with real-time data collection. The system utilizes SARIMA (better than ARIMA and Prophet). The SARIMA model trained using Air Quality Index (AQI) values based on CPCB's sub-index approach is retrained daily to keep pace with changing pollution trends. Upon optimization, it produced a Mean Absolute Percentage Error (MAPE) of 13.57%. The system includes real-time Application Programming Interface (API) connectivity, retraining on the fly, and generation of forecasts, always operating with minimal human intervention for accurate short term prediction.
Individual Contribution: Optimized SARIMA models by adjusting seasonal and trend parameters. Implemented Prophet models. Engineered lag and rolling features for PM2.5 and ozone prediction. Conducted residual diagnostics to improve forecast accuracy.

Title: Spatio-Temporal Analysis of Air Quality Disparities Across Urban and Rural India
Duration: Jan'25 – Apr'25; **Team size**: 3
Summary: This analysis looks at air quality in five pairs of urban and rural locations in India. It calculates the Air Quality Index (AQI) based on the Central Pollution Control Board framework. This uses over two and a half years of multi-pollutant data. The study uses spatio-temporal decomposition, Random Forest Regression, and K-Means Clustering to find pollution sources and trends. The results show clear seasonal patterns: In winter, PM2.5 dominates urban areas, while ozone levels rise in rural areas during summer. A novel Pollution Disparity Index (PDI) was employed to quantify urban-rural pollution differences, which revealed significant disparities that challenge conventional assumptions.
Individual Contribution: Applied K-Means clustering and on spatial AQI data to identify urban–rural pollution clusters, implemented seasonal decomposition to isolate trends, and validated the Pollution Disparity Index using ANOVA tests

Title: AOI-Inspired Descriptive Rule Mining: Unlocking Insights from Non-Hierarchical Data
Duration: March'25 – Sep'25; **Team size**: 3
Summary: This research adapts Attribute-Oriented Induction for non-hierarchical data to extract interpretable behavioral insights from Amazon Fashion Reviews. The approach systematically discretizes continuous and fine-grained variables into lightweight, hierarchy-like proxies to make previously incompatible datasets amenable to generalization-based rule induction. Rule evaluation then integrates two complementary measures: T-weight, to capture a pattern's representativeness within a specific group, and D-weight, to highlight its distinctiveness across different groups. By prioritizing rules with both high T- and D-weight, the methodology produces a concise and interpretable rule set.
Individual Contribution: Extended Attribute-Oriented Induction with discretization proxies, applied discriminant rule mining using T-weight and D-weight metrics, and leveraged frequency-based pruning to extract interpretable rules from 2.5M Amazon reviews

Title: Weighted Ensemble Outlier Detection for Anti-Money Laundering
Duration: March'25 – Sep'25; **Team size:** 3
Summary: This system for IBM Anti-money laundering employs a framework that integrates four complementary algorithms: statistical (Z-Score with Random Forest), density-based (Local Outlier Factor), distance-based (Isolation Forest), and graph-based (Graph Neural Networks). It unites interpretable outlier detection approaches with Graph Neural Networks (GNNs) which achieved 92% sensitivity and 81% specificity on IBM AML dataset, enabling the system to capture both global anomalies and relational patterns in transaction networks. A weighted ensemble is created from each algorithm based on its performance (sensitivity, specificity, and ROC-AUC) balancing diverse detection capabilities.
Individual Contribution: Developed a weighted ensemble combining Local Outlier Factor (LOF), Isolation Forest, k-Nearest Neighbors, and a Graph Neural Network (GNN), optimized hyper-parameters, calculated weights based on each model performance

TECHNICAL SKILLS

Languages: Python, C/C++, Java, SQL, Bash/Shell
Libraries & Frameworks: PyTorch, Scikit-learn, OpenCV, NLTK, MediaPipe**,** Pandas, NumPy, Matplotlib, Seaborn
Databases & Cloud: MySQL, MongoDB, SQLite, AWS, Azure, Docker, Git
Web & Tools: HTML, CSS, JavaScript, React.js, Node.js, REST APIs, VS Code, Jupyter, Keycloak

EXTRACURRICULAR ACTIVITIES

- Chairperson ACM Student Chapter of CEG (June 2025 - Present)
  - Spearheaded a team of 66+ to organize C.O.D.E., an internship and placement training program, at Anna University, recognized by the **Center for University–Industry Collaboration (CUIC)** engaging **770+ students.**
  - Curated **Tech Talk Series**, featuring industry leaders such as **Manoj Sivakumar (SVP, HubSpot)**; handling speaker outreach, marketing, and event logistics.
  - Organized CodHer hackathon for 330+ students sponsored by **Motorq (₹40,000 prize pool) by coordinating** sponsorships, logistics, and industry judges.
  - Revived Prodigy symposium (250+).

- Deputy Head of HR and Logistics CSAU (Computer Society of Anna University) (July 2024 – June 2025)
  - Managed recruitment and coordination of **40+ members** and streamlined communication across projects through regular documentation in Google Drive and Sheets.
  - Directed flagship events such as Tour-de-Code, a 10-hour hackathon with **80+ teams** and a **₹6,000 prize pool**, and the Git Workshop with **520+ participants**.
  - Assisted in organizing Code Cycle and other hackathons, each attracting around 200 participants, ensuring seamless execution and participant engagement.