Apurva Aggarwal

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Education

Michigan State University East Lansing, MI
Bachelor of Science in Computer Science, Minor in Business *May 2027*

- **GPA:** 3.95 — **Dean's List (Top 1% amongst 500)**
- **Relevant Coursework:** Cloud Development, Biometrics, Artificial Intelligence, Big Data Analysis

Technical Skills

Programming: Python, C/C++, SQL, JavaScript, R, Assembly
Libraries: TensorFlow, scikit-learn, Pandas, Matplotlib, Streamlit
Data Tools: Excel, Tableau, Azure, Docker
Web Dev: HTML/CSS, Flask, React, Node.js, Figma

Experience

Data Analytics Engineering Intern – Tesla, Inc. | *Palo Alto, CA* Jan 2026 – Present

- Develop ELT pipelines in **SQL** and **Python** to ingest, transform, and model high-volume Energy and Sales data
- Build **analytics-ready data models** on distributed SQL/big data systems to power self-serve reporting and dashboards
- Automate Power BI/Tableau dashboards with **data validation**, enabling teams to track KPIs and operational trends
- Maintain **data quality checks**, reconciliation logic, and incident logs to ensure dataset reliability and accuracy

Technology Consulting Intern – Ernst & Young (EY) | *Singapore* May 2025 – Aug 2025

- Led **UAT sessions** with 100 stakeholders to validate migration of **10k+ records**, log bugs, and support beta testing
- Optimized **SQL scripts** in SSMS to automate migration checks, cutting manual QA efforts by **50%**
- Configured **Azure Blob Storage** to modernize file systems, enabling scalable and cloud-native architecture
- Delivered key modules for a **$13M enterprise system** by managing test pipelines and sprints in **Azure DevOps**

Data Analyst – The Global Career Accelerator | *Remote* Aug 2024 – Dec 2024

- Conducted **exploratory data analysis** and **customer segmentation** for clients in e-commerce, media, and education sectors to uncover trends and optimize operations
- Led **A/B testing initiatives** and performed **statistical analysis** to evaluate campaign effectiveness, newsletter performance, and digital conversion strategies
- Developed **data-driven recommendations** for market expansion, support team resourcing, and retention strategies using KPI tracking and regional demand modeling
- Transformed unstructured datasets into **clean, actionable insights** using SQL, Excel, and Tableau, informing high-level business decisions across functions

Projects

Celebrity Face Recognition | *PyTorch, AlexNet, Computer Vision* Dec 2025

- Built a face classification pipeline using a **pretrained AlexNet** model on a custom 17-class celebrity dataset
- Applied **10-fold LOOCV**, achieving **57.35% average accuracy** despite high intra-class similarity
- Integrated **data augmentations** (rotation, flipping, jitter) and **dropout** to improve generalization and reduce overfitting
- Visualized misclassifications via **confusion matrix**, analyzing patterns to identify model improvement strategies

Micro Foods Market (Backend) | *Docker, Flask, REST API, SQLite, JWT* Apr 2025

- Engineered **5 microservices** (auth, product, order, search, logging) using Flask and **RESTful APIs** for modularity
- Implemented **JWT-based authentication** to manage user and employee access securely across distributed services
- Configured Dockerized services enabling container communication and **cloud-deployment readiness**

Grammy Audience Analysis | *Python, Excel, A/B Testing, KPI Analysis* Oct 2024

- Uncovered seasonal user spikes by analyzing Grammy.com traffic trends, informing engagement strategy for marketing team
- Benchmarked post-restructuring site metrics in Excel, revealing **higher bounce rate** and lower session duration
- Ran A/B test on pages/session, using automation to validate separation strategy and **recommend UX improvements**

FarmX (MHacks 2024 Winner) | *Python, Streamlit, scikit-learn, Pandas, NumPy* Sept 2024

- Built an end-to-end **ML pipeline** with **Random Forest**, optimizing nitrogen levels and reducing waste by **25%**
- Deployed a **scalable backend** with **Streamlit**, integrating **data caching using Pickle** for a **30%** faster response time
- Processed **agricultural datasets** using **Pandas** and **Matplotlib**, providing insights and recommendations for farmers
- Integrated **weather and soil condition APIs**, allowing real-time adjustments to nitrogen recommendations

Leadership & Involvement

SpartaHack, Michigan State's Hackathon – Logistics Lead
Artificial Intelligence Club – Project Developer
MSU Student Life & Engagement – Resident Assistant
International Student's Organization – RHA Representative
Instagram Content Creator – Produced music content reaching 20K+ views across 10+ videos