Apurva Aggarwal

201-551-9782 | aggarw86@msu.edu | linkedin.com/in/apurva0510 | github.com/apurva0510

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

Languages: Python, SQL, C/C++, JavaScript, R, Assembly **Data & ML:** Pandas, NumPy, scikit-learn, TensorFlow, PyTorch
Systems & Cloud: Azure, Docker, Git, REST APIs, Microservices **Analytics & Visualization:** Tableau, Power BI

Experience

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

- Engineered a production-scale **entity resolution pipeline** using TF-IDF weighting, Levenshtein similarity, and geo-aware reranking, achieving **90%+ accuracy** while reducing manual review by **280+ hours per 10K records**
- Led a cross-functional **GenAI sales enablement initiative** across **16 sales workflows**, translating sales feedback into reusable prompt systems for scalable AI-assisted outreach automation
- Owned executive-facing **business reporting** for Tesla's residential solar product line, tracking operational and revenue KPIs across weekly, monthly, and quarterly reviews
- Scaled CRM analytics for **20+ Sales stakeholders** by automating Python data pipelines and refresh workflows while preserving account context and sales tracking integrity

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

- Led client-facing **UAT** for migration of 10K+ records to a cloud-based platform, identifying critical defects prior to release
- Automated migration validation workflows using **SQL (SSMS)**, reducing manual QA effort by 50%
- Migrated legacy file storage to **Azure Blob Storage**, enabling secure infrastructure for a $13M enterprise system
- Managed sprint workflows and defect tracking in **Azure DevOps** to ensure on-time module delivery

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

- Analyzed **30M+ engagement records**, uncovering 5× higher engagement rates for photo posts
- Designed statistically powered **A/B experiments**, performing hypothesis testing, power analysis, and MDE calculations to evaluate campaign and conversion rate changes
- Built **KPI dashboards** in SQL and Tableau, standardizing reporting pipelines for executive stakeholders
- Led **cohort-based segmentation** across multi-industry datasets to quantify growth and churn drivers

Projects

Celebrity Face Recognition | *PyTorch, CNNs, Transfer Learning* Dec 2025

- Implemented a transfer learning pipeline using a pretrained **AlexNet** model to classify a 17-class celebrity dataset
- Achieved **57.35% accuracy** on a high intra-class similarity dataset using k-fold cross-validation
- Applied data augmentation (rotation, flips, color jitter) and dropout regularization to reduce overfitting
- Analyzed misclassifications via confusion matrix and error inspection to guide iterative model refinement

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

- Built a Dockerized backend with 5 Flask microservices for authentication, orders, search, logging, and product management
- Implemented RESTful APIs and **JWT-based authentication** for secure distributed transaction workflows
- Configured Docker networking and service orchestration for **cloud-deployment readiness**

Intel Sustainability Modeling | *Time-Series Forecasting, Data Modeling, Tableau* Nov 2024

- Built **time-series forecasting models** to project regional energy capacity under carbon-neutral constraints
- Engineered forecasting pipelines to rank 5 U.S. regions by long-term energy availability
- Developed scenario-driven visualization tools to support **infrastructure site selection decisions**

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

- Built an end-to-end ML pipeline using **Random Forest regression** to optimize NPK nutrient levels, reducing waste by 25%
- Engineered data preprocessing and feature engineering workflows using **Pandas and NumPy**
- Developed a lightweight backend in Streamlit with caching optimization, improving response time by **30%**
- Integrated **external weather and soil APIs** to enable real-time adaptive recommendations

Leadership & Involvement

SpartaHack – Co-Director for 600+ attendee student-run hackathon
Resident Assistant – Mentored and supported 80+ students in a residential community
International Student' Association – Director of Technical Affairs, building centralized affiliate web platform
Instagram Content Creator – Produced music content reaching 20K+ views