Aakash Suryavanshi

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
Master of Science in Computer Science / GPA: 4.00   *August 2025 – May 2027*

Georgia Institute of Technology   Atlanta, GA
Bachelor of Science in Computer Science / GPA: 3.52   *January 2022 – May 2025*

TECHNICAL SKILLS

Languages: Python, Java, C++, SQL, JavaScript, HTML/CSS, Swift, R
Data & Analytics: Pandas, NumPy, scikit-learn, PyTorch, Matplotlib, Tableau, Power BI, Excel
Databases & Tools: MySQL, SQLite, Git, Docker, AWS, VS Code, PySpark
Machine Learning: Regression, Classification, NLP, Computer Vision, A/B Testing, Time Series

EXPERIENCE

Research - Machine Learning | *Georgia Institute of Technology, Atlanta, GA*   January 2024 – August 2025
- Built a PyTorch CNN for aerial fire detection, enabling onboard alerts at **100 FPS with 95% precision**
- Programmed drone navigation logic to convert detections into **GPS waypoints** and autonomously fly toward fires
- Implemented OpenCV edge/contour avoidance to steer around terrain and obstacles with **0.5s retargeting**
- Created a **data/telemetry pipeline** to log images, GPS, and decisions for reproducible testing

PROJECTS

Capital One Finance Analysis | *SQL, Tableau, Excel, Python, Data Analyst*   June 2025 – July 2025
- Parsed **4 months of Capital One PDFs** in Python, extracting date/item/amount into an analysis ready table
- Normalized and categorized transactions with Excel lookups, fixing vendor variants and duplicates
- Built a Tableau spend dashboard that flagged discretionary spikes and helped cut **monthly spending by 20%**

Stock Market Timing Analysis | *SQL, Tableau, Data Analyst*   June 2025 – July 2025
- Loaded daily S&P 500 prices (**1993–2025**) into SQL and built rolling returns, enabling cohort timing tests
- Simulated buys on all time high vs other days with SQL cohorts, compounding to 2025 to isolate timing effects
- Visualized results in Tableau, showing minimal long run differences and reinforcing **buy and hold strategy**

Nutritional Data Analysis Dashboard | *Python ETL, SQL, Tableau, Data Analyst*   July 2025 – August 2025
- Built Python ETL to join **5 sources into 500k+ rows**, standardizing fields for consistent, repeatable use
- Modeled foods in SQL with macro classes and per calorie scores to enable fast meal comparisons
- Published Tableau views to assemble macro efficient meals, cutting planning time and clarifying trade offs

NYC Housing Decision Dashboard | *Python, Pandas, Tableau, Data Analyst*   June 2025 – August 2025
- Integrated **1M+ NYC records** in Tableau to build a unified model, enabling borough level comparisons
- Analyzed **2025 crime rates and median rent trends** since 2010 to reveal borough cost safety trade offs
- Mapped venue, park, and restaurant density to guide borough selection and narrow ideal neighborhoods

Movie Recommendation System | *Python, PyTorch, Pandas, Machine Learning*   January 2025 – May 2025
- Prepared **100,836 ratings and 9,742 movies** with reproducible Python splits, enabling fair evaluation
- Benchmarked MF, KNN, and autoencoder+MLP in PyTorch, achieving **0.814 RMSE and 0.617 MAE** on test
- Built an inference pipeline that ingests a user's rated watchlist and returns **ranked top N recommendations**

Sports NLP: Player-Style Postgame Answer Generation | *Python, NLP*   January 2025 – May 2025
- Curated **1,000+ answers across 119 games with 10 stat features**, enabling supervised style conditioning
- Trained a PyTorch generator by fusing box-score stats with transcript embeddings, selecting best by validation loss
- Evaluated on a held-out set with **BLEU-4 of 0.28**, yielding coherent, NBA athlete–style responses

LEADERSHIP

Team Manager iOS Club | *Hackathon Winner*   January 2024 – May 2024
- Built a social wellness iOS app with journals, mood tracking, posts, and streaks, enabling daily engagement
- Led **28 person team** via weekly sprints and demos to ship **48 Swift files and 29 SwiftUI views** into stable app
- Presented a live demo to judges at GT's hackathon, **winning 1st place** for innovation, UX, and execution