Aryan Mittal

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EDUCATION

Georgia Institute of Technology   Atlanta, GA

Bachelor of Science, Double Major in Computer Science and Mathematics, GPA: 4.0   *Expected May 2026*

- *Concentrations*: AI/Machine Learning, Information Internetworks, Probability & Statistics
- *Relevant Coursework*: Deep Learning*, Machine Learning*, Data Structures & Algorithms, Probability & Statistical Theory, Advanced Game Theory, Information Theory, Database Systems
  (* graduate-level coursework)

EXPERIENCE

Microsoft   May 2024 – August 2024

Software Engineering Intern   *Atlanta, GA*

- Software-driven Wide Area Network (SWAN) Team at Azure Core Networking

Machine Learning Student Researcher   January 2023 – Present

Joel Sokol Lab (Georgia Tech)   *Atlanta, GA*

- Contracted by MLB team to develop optimization model for enhancing league efficiency and competitiveness (results under review by **MLB Commissioner's Office**, confidential, **details discussable in person**)
- **First-authoring** paper on model and co-designing graduate Sports Analytics course at Georgia Tech
- Designed logistic regression/Markov chain model to predict NFL playoffs (**beats** consensus spread: **63%** accuracy)
- Leading undergrad team in R&D of deep learning model for diagnosing diseases through stethoscope audio
- **Skills:** Python, PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Gurobi, Mathematical Optimization

UPS Supply Chain Solutions   June 2023 – August 2023

Software Engineering and Analytics Intern   *Alpharetta, GA*

- Prototyped **98%** accurate cloud-based computer vision application for package damage detection and reporting (est. annual savings **$5M**)
- Restructured timecard database (**1.5M** entries) and corrected the pay rates for **350K** workers using Python script
- Wrote **3** automated test suites for new workforce management system (WMS) to be used by **400K** employees
- Created **4** Power BI reports to track work item status across entire WMS project (**60+** personnel)
- **Skills:** Power BI, Google Cloud Platform, BigQuery, Vertex AI, Python, Pandas, Flask, Java, Azure DevOps

Mathematics Teaching Assistant   August 2023 – Present

School of Mathematics, Georgia Tech   *Atlanta, GA*

- Courses Taught: Multivariable Calculus, Linear Algebra
- Teach weekly studio/recitation sessions to **70+** students and hold office hours
- Grade student homework, quizzes, exams, and projects

Mathematics Researcher   October 2021 – May 2023

Clayton State University Department of Mathematics   *Morrow, GA*

- Invented graph-theoretic game with applications in statistical physics and studied optimal play strategies
- Proved sharp upper bound theorem for game score and implemented best-play algorithm
- Co-authored final paper (submitted for publication, arXiv: 2403.18060)

PROJECTS

Package Damage Detection and Report   July 2023

- Awarded **1st** Place among Google Cloud projects and **2nd** Place across entire company (**250+** participants)
- Created computer vision model to detect damaged packages in warehouses and a Looker report to visualize trends
- Pitched design to panel of UPS CEO, CTO, and 10 VPs as team captain (team of 5)

Formulytics | *devpost.com/software/formulytics*   February 2023

- Winner of **$500** "Best Sports Project" award at Hacklytics 2023 (**400+** participant hackathon)
- Developed Node.js website for live tracking of Formula 1 racers (team of 3)
- Implemented neural-network-based method of estimating in-race win probabilities using only lap times

TECHNICAL SKILLS

Languages: Python, Java, SQL, HTML/CSS
Technologies: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, XGBoost, Power BI, BigQuery, Gurobi, OpenCV, Matplotlib, Seaborn, Pyplot, Django, Flask, BeautifulSoup, Selenium