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*: Intelligence, Information Internetworks, Probability & Statistics
- *Relevant Coursework*: Data Structures & Algorithms, Probability & Statistical Theory, Advanced Game Theory, Advanced Linear Algebra, Artificial Intelligence, Honors Algorithms, Database Systems

EXPERIENCE

Software Engineering Intern   June 2023 – August 2023

UPS (United Parcel Service)   *Alpharetta, GA*

- Architected vision-based package damage detection/reporting application for UPS Hackathon (**1st** place)
- Wrote automated tests for high-budget Payroll Transformation program (STP) to be used by 400K employees
- Created 3 Power BI reports to track work item status across entire STP program
- Developed Python script to restructure timecard database (1.5M rows) and correct the pay rate for 350K workers
- **Skills:** Power BI, Google BigQuery, Python, Pandas, Flask, Java, TestNG, JMeter, Azure DevOps

Sports Analytics Researcher   January 2023 – Present

Joel Sokol Lab, School of Industrial and Systems Engineering, Georgia Tech   *Atlanta, GA*

- Currently developing statistical framework to quantify teammate effects on individual football player performance
- Exploring applications of framework to optimizing team lineups and drafting strategy
- Designed logistic regression/Markov chain (LRMC) model to generate improved NFL team rankings
- Outperformed consensus spread and top computer ratings in predicting NFL playoff outcomes (63% accuracy)
- **Skills:** Python, R, Scikit-learn, Pandas, NumPy

Mathematics Researcher   October 2021 – May 2023

Clayton State University Department of Mathematics   *Morrow, GA*

- Invented "The Cordiality Game" (original combinatorial game) 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)

PROJECTS

Home Rental Price Prediction | *github.com/thearyanmittal/atl-home-rentals*   July 2022 – September 2022

- Scraped over 30,000 Atlanta region home rental listings from Georgia MLS site
- Cleaned, feature engineered, visualized correlation, and factor analyzed data using Pandas, Numpy, Matplotlib
- Fit and selected regression models with Scikit-learn to predict prices within $600

Package Damage Detection and Report   July 2023

- Created computer vision model to detect damaged packages in warehouses and a Looker report to visualize trends
- Pitched design to panel of 10 UPS Vice Presidents as team captain (team of 5)
- Awarded 1st place across entire company for best usage of Google Cloud Platform and cutting-edge technology

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

- 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
- Winner of $500 "Best Sports Project" award at Hacklytics 2023 (400+ participant hackathon)

Balanced News Aggregator | *github.com/thearyanmittal/news-aggregator*   October 2020 – February 2021

- Created Django web application that presents news articles from both sides of the political spectrum to users
- Scraped data from 10 different news sites using BeautifulSoup and Selenium
- Designed fully-functional user authentication system with password reset option

TECHNICAL SKILLS

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