Aryan Mittal

678-650-7251 | thearyanmittal@gmail.com | thearyanmittal.com | github.com/thearyanmittal | Atlanta, GA

EDUCATION

Georgia Institute of Technology — Atlanta, GA

Bachelor of Science, Double Major in Computer Science and Mathematics, GPA: 4.0   *August 2022 – May 2025*

- *Concentrations*: Intelligence and Information Internetworks, Probability and Statistics
- *Relevant Coursework*: Data Structures & Algorithms, Probability & Statistics, Database Systems, Graph Theory, Advanced Linear Algebra, Multivariable Calculus, Combinatorics, Object-Oriented Programming

EXPERIENCE

Sports Analytics Student Researcher   January 2022 – Present

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

- Applying original logistic regression/Markov chain model to generate improved NFL team power rankings and predict playoff outcomes

Simulation Architecture Engineer   September 2022 – December 2022

Yellow Jacket Space Program: Flight Dynamics Team   *Atlanta, GA*

- Modeled black box deployment and parachute descent in MATLAB
- Developed visualization for black box trajectory and landing zone
- Aided development towards YJSP's goal of launching liquid-fueled rocket to edge of space

Graph Theory Researcher   October 2021 – Present

Clayton State University Department of Mathematics   *Morrow, GA*

- Invented "The Cordiality Game" (original graph-theoretic game) and studied optimal play strategies
- Implemented best-play algorithm in C and proved sharp upper bound theorem for game score on paths
- Investigating game's mixed-strategy Nash equilibrium and co-authoring final paper

Assistant Football Coach (Statistician/Analyst)   June 2019 – November 2021

Community Knights Varsity Football Team   *Stockbridge, GA*

- Compiled detailed opponent tendency reports from game film using Python, Microsoft Excel, and Hudl
- Modeled opponent offensive play-calling with decision trees using Scikit-learn
- Reduced weekly defensive planning time by over 50%
- Awarded state championship ring (2019) and 2 varsity letters (2019 and 2021)

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 Python, Pandas, Numpy, Matplotlib, Seaborn
- Fit and selected regression models with Scikit-learn to predict prices within $600

Balanced News Aggregator | *balancednews.us*   October 2020 – February 2021

- Created Django web application to combat political confirmation bias that presents news articles from both sides of the political spectrum to users
- Scraped data from 10 different news sites using BeautifulSoup and Selenium
- Code at github.com/thearyanmittal/news-aggregator

Remote-Controlled Tank | *github.com/thearyanmittal/the-tank*   June 2021 – July 2021

- Developed remote-controlled (RC) model M4 Sherman tank with 2 other students
- Programmed RC-to-tank wireless communication, tank motion software, and live camera feed web server
- Presented project to 650+ students and faculty at Governor's Honors Program Engineering Expo

TECHNICAL SKILLS

Languages: Python, Java, SQL, HTML/CSS, LaTeX
Libraries/Frameworks: Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, OpenCV, Seaborn, Pyplot, Django, BeautifulSoup, Selenium
Developer Tools: VS Code, Google Colab, Jupyter Notebook, Git/GitHub, Microsoft Excel, Linux/Unix, Windows