Aryan Mittal

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EDUCATION

Georgia Institute of Technology — Atlanta, GA
Bachelor of Science in Mathematics and Computer Science — *August 2022 – May 2026*
- *Concentrations*: Intelligence and Information Internetworks
- *Relevant Courses*: Graph Theory, Multivariable Calculus, Probability & Statistics, Object-Oriented Programming

Community Christian School — Stockbridge, GA
High School Diploma, GPA: 4.0/4.0, Valedictorian — *August 2018 – May 2022*
- *Activities*: Chess Team #1 Board, Chess Instructor, Robotics Team Captain, Quiz Bowl Captain, NHS President

EXPERIENCE

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
- Currently investigating the game's computational complexity and co-authoring final paper

Assistant Football Coach (Statistician/Analyst) — June 2019 – November 2021
Community Knights Varsity Football Team — *Stockbridge, GA*
- Analyzed game film and compiled detailed opponent tendency reports using Python, Microsoft Excel, and Hudl
- Developed comprehensive decision trees using Scikit-learn to model opponent offensive play-calling
- Reduced weekly defensive planning time by over 50%
- Awarded state championship ring (2019) and 2 varsity letters (2019 and 2021)

GHP Software Engineer — June 2021 – July 2021
Georgia Governor's Honors Program (GHP) — *Berry College, Rome, GA*
- One of 13 Georgia students chosen to receive fully-funded educational experience in Software Engineering
- 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 GHP 58 Engineering Expo

PROJECTS

Home Rental Price Prediction | *github.com/thearyanmittal/atl-home-rentals* — July 2022 – Present
- Scraped over 30,000 Atlanta region home rental listings from Georgia MLS site
- Cleaned data and visualized feature correlation with price using Python, Pandas, Numpy, Matplotlib, Seaborn
- Evaluating performance of various regression models and ensemble methods on dataset with Scikit-learn

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

Facial Recognition & Mask Detection | *github.com/thearyanmittal/facial-recognition* — June 2020 – August 2020
- Implemented system using TensorFlow and OpenCV that identifies and labels faces in live camera feed and detects whether face mask is being worn properly

TECHNICAL SKILLS

Languages: Python, HTML/CSS, LaTeX, Java, C
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