

Aryan Gupta

Schaumburg, Illinois 60194 • aryan05g@gmail.com • <https://github.com/aryan-cs>

Education

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Computer Engineering, Big Data Analytics and Systems.

Champaign, IL

2028

JAMES B. CONANT HIGH SCHOOL

BPA Global Marketing Team Champion, National Merit Commended Scholar, National Honor Society

Hoffman Estates, IL

2024

Experience

UNIVERSITY OF CHICAGO

Chicago, IL

Research Intern

June 2023 – September 2024

- Co-authored two peer-reviewed papers at the prestigious ACM CHI Conference, focusing on integrative haptics and wireless power transmission; was the youngest researcher to submit an accepted work
- Engineered and validated prototypes with Python, C++, and Unity, streamlining data collection processes and reducing study timeframe by over 75%
- Developed a machine learning algorithm to simulate electromagnetic interactions between time-variant resonant-inductive systems, increasing transmission efficiency rates by 60%
- Automated data collection through the use of IRB-adhering mechanized study protocols, allowing for statistically significant findings with errors of less than 5%

Projects

FINANCIAL SIMULATIONS

- Created a web-based visualization to demonstrate how the Metropolis-Hastings Algorithm, a Markov Chain Monte Carlo simulation method, samples works in practical applications
- Utilized sentiment analysis on open-source data to create a machine-learning model to paper trade public stocks with a return rate of 78%

INTELLIGENT SOFTWARE

- Designed a Python/C# local-server based avatar virtualization system, allowing users to recreate their physical being in and interact with the virtual world using OpenCV
- Trained an AI classification model on custom data using TensorFlow to differentiate waste types
- Designed an open-source smart trashbin leveraging biotechnology such as plastic-digesting mealworms and Arduino circuitry for local forest reserves

Leadership and Activities

RUN FOR WATER

Schaumburg, IL

Lead Web Developer & Graphic Designer

June 2022

- Co-founded a local community initiative to raise over \$18,800 for villages in third-world countries with weak water supply systems, impacting the lives of 2,700 villagers across multiple continents
- Managed sponsorship deals, frontend and backend development for outreach website, and the online payment system, accounting for over 85% of the total funding raised

Skills & Interests

Research Processes: Study Automation, Data Visualization & Analysis

Technical: Python, C++, Java, Javascript, Tensorflow

Planned Courses: Linear Algebra with Financial Applications, Statistics & Probability

Interests: Free climbing, hiking, wilderness survival, *How I Met Your Mother*