Arsh Banerjee

M.Eng. Candidate, Cornell University. Passionate about solving complex problems through the application of machine learning. Demonstrated success in innovative projects and internships focusing on the deployment of ML/AI.

ab2736@cornell.edu
arshbanerjee.com
github.com/arsh-banerjee
linkedin.com/in/arsh-banerjee/
(201) 918-1312
Princeton, NJ

Experience

Verizon, Branchburg, NJ — *Software Engineering Intern*

June 2023 - August 2023

- Developed and deployed scalable automation solutions to streamline performance monitoring of Verizon's core network devices, reducing manual effort by 50%.
- Engineered efficient data pipelines using SQL and RESTful APIs to integrate and analyze metrics from multiple databases. Collaborated with a cross-functional team to implement real-time visualization dashboards, improving network health insights and decision-making processes

Verizon, Basking Ridge, NJ — *Machine Learning Intern*

June 2022 - August 2022

- Designed and deployed a cloud-based computer vision pipeline for robotic coordination, achieving 90% accuracy in real-time object tracking and enabling seamless multi-robot navigation.
- Leveraged AWS-hosted AI models to ensure scalability and robust performance in dynamic environments.

NJIT iXR Lab, Newark, NJ — *Data Analytics Intern*

June 2019 - August 2019

Used machine learning and data analytics (Python & R) to analyze data from mixed reality (XR) applications to aid in the design of gaze-contingent displays for gaming and social applications for the Interactive Cross-Reality Lab

Education

Cornell University — *M. Eng in Computer Science* (Aug. 2024 - May 2025)

Specialization in Machine Learning and Artificial Intelligence

Princeton University — *B.S.E. in C.S.* (Sept. 2020 - May 2024)

Magna cum laude, Minors in Optimization and Quantitative Decision Science, Statistics and Machine Learning, and Cognitive Science

- Conducted research on generating synthetic genomic data for underrepresented populations in cancer datasets using Generative Adversarial Networks (GANs). Designed and trained GAN models to simulate diverse genetic profiles, addressing data imbalances and enhancing the inclusivity of cancer research and predictive modeling

Course Assistant for COS 445 (Economics and Computing)

Bayonne High School (September 2016 - June 2020)

Valedictorian, National Merit Scholar, Student Gov. President

Skills

Programming Languages:

Python, Java, Go, R, ROS, Matlab, SQL, C+

Libraries & Frameworks:

OpenCV, Tensorflow, Keras, XGBoost, PyTorch, Pandas, Numpy, Git/Github, Linux, AWS, OpenAI API

Courses:

Computer Vision, NLP, Machine Learning, Data Structure and Algorithms, Optimization, Computer Graphics

Awards

Intel Excellence in Computer Science Award - 2019

Fourth Place at Intel International Science & Engineering Fair - 2017

Projects

Detecting AI-Generated Images

Involved in the development of a tool for detecting AI-generated images from diffusion models, with >90% accuracy

Text-to-SVG Pipeline

Trained LORA for StableDiffusion to create sketch-style images that are then converted to SVG

Image Geolocation

Trained a CNN on Google Maps Images to predict the country with 92% accuracy

Certifications

AWS Certified Developer Associate (DVA-C02) - Obtained July 2024