

Alex Murray

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EDUCATION

Bachelor of Science: Computer Science, University at Buffalo, Buffalo, New York, June 2026

- GPA: 3.5, University at Buffalo Dean's List, Spring 2023- Fall 2024
- Relevant Courses: Distributed Systems, Web Applications, Artificial Intelligence



SKILLS & TOOLS

Languages: Java, Python, C++, Go, MIPS Assembly, Swift, HTML, CSS, TypeScript, OCaml

Data Management & Analytics: MySQL, PostgreSQL, MongoDB, Firestore, Numpy, Matplotlib, pandas

Tools: Jupyter, Visual Studio, JetBrains, Google Cloud, AWS, Clerk, Supabase, huggingface, Kaggle, Docker

Libraries and Frameworks: Tailwind, FastAPI, OpenCV, React, shadcn, scikit-learn, Mediapipe

WORK EXPERIENCE

Co-Founder, BetGenie, Buffalo, NY, May 2025 – Current

- Collaborated on developing a sports-book discrepancy finder that gives users favorable bets using machine learning models through huggingface and scikit-learn
- Implemented user authentication and information system using Clerk and PostgreSQL via Supabase to keep track of user activity and payment information.
- Utilized AWS cloud compute to effectively train and run prediction models, scoring an accuracy of 70%

Data Science Intern, National Science Foundation, Buffalo, NY, June 2025 – August 2025

- Re-developed the Popworld application to be used by thousands in the UB's Evolutionary Biology course to simulate how evolutionary forces modify a population over the course of "n" generations
- Leveraged Google Cloud Run and Firestore to host the application in the cloud and simultaneously write and export the necessary user data from the Firestore database in a way that is accessible
- Utilized TailwindCSS, shadcn, and React functions to make a responsive and accessible frontend.

PROJECTS

Computer Vision Mouse, OpenCV, Mediapipe

- Created a hands-free computer mouse interface using OpenCv and Mediapipe such that users can control their mouse pointer solely with their hands and a webcam
- Used dampening function to decrease latency, giving the user a smooth "mouse-like" experience

Blackhole/Space Simulation, C++, OpenGL

- Enhanced an existing project, updated physics/animations to help better understand the mysteries of the universe using 3D modeling

AI Cartoon Generation, huggingface, AWS

- Employed diffusion models on huggingface via AWS EC2 cloud compute to generate short snippets of cartoon images that are then compiled together to create short cartoons using python

Automated Soccer Offside Detection, OpenCV, Numpy

- Led a team at UB hacking 2024 to automate determining offsides in soccer via video input and utilizing OpenCV, and Numpy to perform linear transformations that identify if the offsides rule is violated

Football Match Predictor, Numpy, scikit-learn

- Fine-tuned scikit-learn and its machine learning algorithms to predict the outcomes English Premier League using Kaggle datasets and python

Leadership

Welcome Weekend Leader, UB Orientation Office, August 2024

Intramural Soccer Referee, UB Recreation Intramural Sports Program, March 2023 – May 2025

Maspeth Town Hall Youth Leader, Maspeth Town Hall, Jun 2022 – Aug 2022