# **BENJAMIN YAM**

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Ithaca, NY

# **EDUCATION**

Cornell University, College of Engineering,

Master of Engineering, Computer Science

Expected Dec 2024 GPA: -

Bachelor of Science, Major in Computer Science, Minor in Mathematics

Aug 2021 - May 2024 GPA: 3.54 – Cum Laude

*Relevant Courses:* Computer Vision, Robot Learning, Reinforcement Learning, Machine Learning, Computer Graphics, Database Systems, Artificial Intelligence, Functional Programming, Operating Systems, Computer System Organization, Probability and Statistics, Data Structure, Discrete Structure, Python

**Awards**: Dean's Honor List, National Honors Society, NYS Academic Excellence Scholarship, AP Scholar with Distinction, Hope Scholarship Foundation Award

### **PROJECTS**

# **Snack Searching Web App**

Used SVD and Cosine Similarity to recommend snacks to user from a dataset of snacks (web scraped from Yamibuy and Amazon)

# AI Blackjack Game

Trained AI players on RL alg and deep network to learn card counting with a win rate of 52% (beating average Blackjack win rate)

## **Autonomous Driving**

Trained car to drive on a mountain landscape on Microsoft Airsim environment using Actor Critics PPO and DFO on images.

#### Man sitting on the Moon model

Built Ray Tracer to render a human model on the moon terrain from NASA.

#### **Fulltstack Spotify Clone**

Using MERN to build a fully functional music playing application

## **Fullstack Chatgpt Clone**

Fully functional AI assistance with authentication, context history, payment

#### **ENGINEERING EXPERIENCE**

Headstarter AINew York, NYSWE FellowJul 2024-present

- Participated in 3 hackathons in teams of 3 building lifestyle GPT, AI Study Flashcard, web scraper
- Build weekly projects and meeting deadlines: landing page, pantry tracker, e-commerce site

Cup Robotics Project Team

Ithaca, NY

Team Member

Oct 2021-Feb 2023

- Collaborate with 70 team members in the design, manufacture, and assembling of robotics-oriented projects (Chatbot integrated with ChatGPT, GUI using React.js, Overhead Vision System with Apriltag)
- Design GUI that let users access the vision system, Chatbot, Physical blocky, and connect robots. Design Chatbot GUI that uses speech recognition and stores context using React.js and Python.
- Decrease Overhead Vision System's x, y, and angle offsets by 80% and improve the algorithm for locating Apriltag

United Building Sciences Limited Manhattan, NY

Ouality Control Inspector Intern April-Jun. 2021

• Analyze building blueprints, and check fire control, ventilation, and water sprinkler systems within 4 buildings in Midtown and Queens to ensure structural safety

#### **JOB EXPERIENCE**

**EMO America** Manhattan, NY Full Stack SWE/Project Lead Jun 2024-Aug 2024

- Developed and maintained fullstack web applications using html, css, js resulting in 20% increase in user engagement track with google analytics
- Collaborated/lead a cross-functional teams of 8 members, including designers and WDE to deliver high quality software solution on time
- Optimized website performance by reducing page load times by 35% through code refactoring and lazy loading
- Developed and launched 7 new features based on user feedback, resulting in 30% increase in user satisfaction scores

**Hyatt Place** 

Flushing, NY

Gallery Host Intern/Lead

Jun 2023-Aug 2023

• Assisted an average of 350 visitors per day with inquiries and provided information about the hotel.

• Assisted in maintaining accurate visitor logs and data entry, contributing to improved record-keeping efficiency.

• Successfully managed multiple tasks, such as attending to visitors, handling phone inquiries, managing kitchen staff, and assisting with event preparation, while consistently meeting deadlines

Math 1920 AEW Facilitator Ithaca, NY

Facilitator Aug 2022-May 2023

• Review and prepare Multivariable Calculus materials weekly for a class of 22 students per semester.

Increase the median of the student body enrolled in AEW session scores a median above the general class by 10%

United Postal Service Bayside, NY Sales Associate Jun - Aug. 2021

• Managed the CMS system in order to process 150 shipments from Amazon returns to shipping of high-values

Organized 300 customers' mails/packages daily into respective mailboxes to ensure customer satisfaction.

#### **LEADERSHIP**

Cornell UniversityIthaca, NYResident AdvisorJan 2023-Present

• Led initiatives that celebrated cultural diversity, such as heritage month events, attended by an average of 30 residents

• Increased resident engagement by 50% after my first year through innovative programming and activities.

• Organized and led 4 events per semester, fostering connections among 160 residents and promoting a sense of belonging

## SPECIALIZED SKILLS

Languages: Cantonese (Fluent), English (Fluent), Mandarin (Proficient), Korean (Intermediate)

Programming Languages: Python, OCaml, Java, C, HTML, CSS, Javascript, ReactJS, TypeScript, C, C++

Database: MongoDB, PostgreSQL, Firebase

Framework and Libraries: Express.js, React.js, Next.js ML Tools: Tensorflow, SKlearn, Numpy, PyTorch, Keras

Tools: Git, XCode, AutoCAD, Inventor, Eclipse, Visual Studio Code, Jupyter, ClimpChamp, Blender