

BENJAMIN YAM

By82@cornell.edu || 646-591-2574 || [linkedin.com/in/benjaminyam1](https://www.linkedin.com/in/benjaminyam1) || [byam24.github.io/BenjaminYam/](https://github.com/byam24)

EDUCATION

Cornell University, College of Engineering,
Master of Engineering, Computer Science
Jan 2024 - Dec 2024

Ithaca, NY

Bachelor of Science, Major in Computer Science, Minor in Mathematics
Aug 2021 - May 2024

Relevant Courses: Deep Learning, Network, Natural Language Processing, 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, Entrepreneurship, Project Management

Awards: Dean's Honor List, NYS Academic Excellence Scholarship, Hope Scholarship Foundation Award

SKILLS

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

Programming Languages: Python, OCaml, Java, C, Javascript, TypeScript, C, C++, Go, SQL

Database: MongoDB, PostgreSQL, Firebase, Pinecone

Framework and Libraries: Express.js, React.js, Next.js, Flask, Bootstrap, Mongoose, Tailwind CSS

ML Tools: Tensorflow, SKlearn, Numpy, PyTorch, Keras, OpenCV, Pandas, Matplotlib, Scipy

Software: AWS, Git, XCode, AutoCAD, Inventor, Eclipse, Visual Studio Code, Jupyter, ClimpChamp, Blender, UTM, Bash, Zsh

OS: Linux, MacOS, Ubuntu, Windows

Game Development/Simulation: Unity

DevOps: Docker, Jenkins

Robotics: ROS

Design Tool: HTML, CSS

PROJECTS

Snack Searching Web App

Snack recommendation app built with Python and Bootstrap framework implementing SVD, Jaccard, and Cosine Similarity to recommend snacks to user from a dataset web scraped from Yamibuy and Amazon

AI Blackjack Game

Trained AI players on Reinforcement Algorithms and deep network built with Keras and Tensorflow to learn card counting with a win rate of 52% (beating average Blackjack win rate 42%)

Autonomous Driving

Trained car to drive on a mountain landscape on Microsoft Airsim environment using Deep Learning (PyTorch), Actor Critics PPO, and DFO on images from front camera

Man sitting on the Moon model

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

Fullstack Spotify Clone

Using MongoDB, Express.js, React.js, Node.js, Cloudinary to build a fully functional music playing application

Fullstack ChatGPT Clone

Fully functional AI assistance with authentication, context history, payment with ReactJs, StripeAPI, ClerkAPI, AWS EC2

ENGINEERING EXPERIENCE

CATchain

Ithaca, NY

AI/Blockchain Engineer

Aug 2024-present

- Created user registry platform and verification methods to verify carbon plan credibility
- Developed a Multi-Agent-based Retrieval Augmented Generation (RAG) system for carbon reporting, integrating external knowledge sources with LLMs, achieving higher accuracy in generated reports
- Optimized an existing blockchain-based carbon registry platform using React.js, Node.js, and Golang, leading to a 15% reduction in transaction latency.
- Developed and deployed smart contracts on Hyperledger Fabric, increasing the platform's operational efficiency by 25%.

DIAPER Nutrition

Ithaca, NY

Frontend SWE

Aug 2024-Sep 2024

- Create user platform to upload stools to be stored in MongoDB database for processing and analysis

- Analyzed over 10 GB of mobile app data, identifying key physical, biochemical, and microbial features of stool that impact infant GI health.
- Assist in implementing computer vision algorithms, CNN, and SIFT that improved the accuracy of feature identification in infant diaper images
- Developed machine learning models to predict infants' GI health, achieving a 25% improvement in predictive accuracy.

Headstarter AI

SWE Fellow

New York, NY

Jul 2024-Sep 2024

- Achieved 100+ users login in AI Study Flashcard app built with Gemini API, ClerkAPI, StrapeAPI
- Build a AI Resume App in a team of 4 with MERN stack becoming top contender out of 500+ teams
- Build weekly projects and meeting deadlines: landing page, pantry tracker, e-commerce site, AI Resume App, Rate my professor app

EMO America

Full Stack SWE intern/Project Lead

Manhattan, NY

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

Cup Robotics Project Team

Software Developer

Ithaca, NY

Oct 2021-Feb 2023

- Collaborate with 70 team members (Mechanical Engineers, Electrical Engineers, Software Engineer) 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

Quality Control Inspector Intern

Manhattan, NY

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

Hyatt Place

Gallery Host Intern/Intern Lead

Flushing, NY

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

Facilitator/ Teaching Assistant

Ithaca, NY

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

Sales Associate

Bayside, NY

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 University

Resident Advisor

Ithaca, NY

Jan 2023-Present

- Led initiatives that celebrated cultural diversity, such as heritage month events, attended by an average of 30 residents
- Increased resident engagement in three separate resident communities through innovative programming and activities.
- Organized and led 4 events per semester, fostering connections among 1200+ residents and promoting a sense of belonging and inclusion