

ALISSA HSU

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EDUCATION

New York University, Courant Institute of Mathematical Sciences

New York, NY

Bachelor of Arts in Computer Science, Minors in Economics and Business Studies and Web Programming

Expected May 2026

- **GPA:** 3.43/4.00 | **Courses:** Data Structures, Basic Algorithms, AI, Web Design and Computer Principles, Discrete Math, Statistics, Calculus, Macroeconomics, Financial Accounting, Computer Systems Organizations, Web Development, Drawing on the Web
- **Activities:** Creative Tech club (President), Tech@NYU, NetImpact

WORK EXPERIENCE

Kaizen8

Closter, NJ

Software Engineering Intern

May 2024 – present

- Launched full-stack website showcasing the company's newest product utilizing third-party and Shopify APIs
- Implemented custom Shopify Liquid code to replace expensive app add-ons, cutting operational costs by \$500+
- Integrated site with in-house systems, streamlining exportation and cutting third-party order fulfillment costs by 20%

Ideas Lab

New York, NY

Software Engineering Intern, Machine Learning

May 2023 – Aug 2023

- Developed a computer vision model (YOLOv8) with 85% accuracy to support integral in-app golf ball trajectory analysis
- Engineered a synthetic data generator (OpenCV) to produce 1,000+ diverse images to account for all possible conditions
- Constructed convolutional neural networks using PyTorch and TensorFlow to create a precise object detection model

Kaizen8

Closter, NJ

Product Management Intern

May 2022 – Aug 2022

- Compiled data on 100+ up-and-coming products, contributing to the becoming a top 100 Amazon seller globally
- Broadened the range and diversity of the distributor network, expanding the product catalog to 2,500+ items
- Improved order fulfillment efficiency by 20% by optimizing the structure of product preparation workflows

PROJECTS

Emotion-Based Music Recommender System Using Image Classification

- Designed the website to be an interactive and fun platform for users to play with emotion-based music recommendations
- Leveraged a pre-trained emotion detection model from DeepFace with over 97% accuracy for real-time emotion recognition
- Integrated Spotify API to pair detected emotions with over 1,000 music tracks and user personalized recommendations

Generative Art Portfolio

- Crafted each piece to explore novel full-stack tools while delivering unique and immersive artistic experiences to users
- Experimented with mathematical calculations, randomness, and user interactivity to create visually compelling artwork
- Demonstrated proficiency in navigating Web APIs, raster and vector graphics, CSS animation, JavaScript libraries, etc.

Full Stack E-Commerce Site with Shopify

- Integrated Shopify API to expand on the platform's capabilities by streamlining payment and inventory automation processes
- Enhanced the visual appeal and efficiency of consumer experience with page customizations to boost sales conversion rate

Computer Vision Golf Ball Tracking and Detection

- Produced an ML model capable of precise detection adept at handling varying trajectories and lighting conditions
- Examined the model's feature map to correct for false positives, lower detection regions, etc. to improve future iterations

SKILLS AND INTERESTS

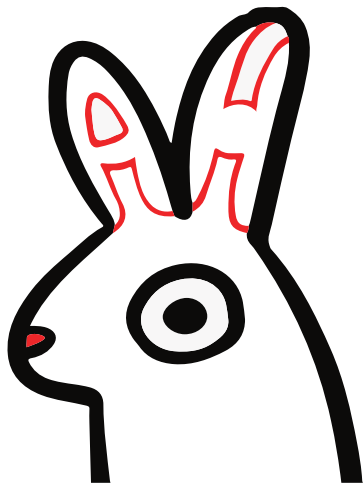
Programming Languages: Python, Java, C, HTML, CSS, JavaScript, SQL, PHP, Swift

Frameworks/Libraries: WordPress, PyTorch, Pandas, NumPy, Scikit-learn, Matplotlib, YOLOv8, OpenCV, Deepface

Technical Skills: Figma, Adobe Illustrator, Premiere Pro, Procreate

Languages: Japanese (proficient)

Interests: Animation, running, tennis



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SKILLS

HTML/CSS/JS
Three.js
Python/Java/C
SQL, PHP
Illustrator
Premiere Pro
After Effects
Adobe Aero
Procreate
Figma

AWARDS

NYU 2025 Climate Change Festival - 2nd

EXPERIENCE

Kaizen8 | May 2024 - Aug 2024

Software Engineer

- launched visually compelling full-stack e-commerce platform
- aligned site with company's goals and brand identity
- designed with user-first approach ensuring accessibility and interactivity

Ideas Lab | May 2023 - Aug 2023

Software Engineer, Machine Learning

- built AI model for real-time golf ball tracking
- optimized training data to ensure precise trajectory predictions,
- improving in-app analytics for users

PROJECTS

Generative Art Portfolio

Web APIs, SVG/Vectors, CSS animation, JS Libraries, Game Dev

- crafted each piece to experiment with novel full-stack tools while delivering unique and immersive artistic experiences to users

In The Mind Palace

2D Animation, Procreate, Premiere Pro

- 2D animation exploring rejection of symbolism and pressure to be "special"
- created with traditional frame-by-frame approach, original storyboarding, character design, and sound design.

3D-Stained Glass Angel

3D Modeling, Three.js

- weeping stained glass angel inspired by Paris' beauty
- first experimentation with 3D rendering, exploring light, perspective, and form

AI Emotion-Based Music Recommender

AI, Computer Vision, APIs, Web Development/Interactivity

- developed interactive platform that recommends songs based on real-time facial emotion recognition
- leveraged DeepFace AI model (97% accuracy) and Spotify API
- blended AI, web interactivity, creative tech to enhance digital music discovery;