

Grant Hu

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Education

Massachusetts Institute of Technology

August 2024 - May 2028

Bachelor of Science in Computer Science and Engineering; Bachelor of Science in Mathematics; GPA: 4.8 Cambridge, MA

- Relevant Coursework: Software Construction, Natural Language Processing, Design and Analysis of Algorithms, Machine Learning, Fundamentals of Programming, Computation Structures, C & Assembly, Linear Algebra, Probability and Random Variables, Statistics, Discrete Math

Lovejoy High School

August 2020 - May 2024

Class Salutatorian

Lucas, TX

- GPA: 4.6308/4.0; SAT: 1570; National Merit Finalist; 19 perfect score AP Exams

Experience

PUFIN-ID A/S

June 2025 - August 2025

AI/Machine Learning Intern, Digital Team

Copenhagen, DEN

- Generated synthetic data of company's O-KEY product through training diffusion models, conditional generative adversarial networks (cGANs), and conditional image-to-image models in order to improve data collection rate by 80%
- Integrated computer vision techniques such as Image Euclidean Distance (IMED) and image segmentation, feature extraction, and edge detection to improve accuracy of data generation by 30%
- Retrieved and modified data from the company MongoDB database of over 500,000 images for model training

MIT Mission Innovate X

February 2025 - Present

Machine Learning Engineer, Picogrid Team

Cambridge, MA

- Designing an improved YOLOv11 computer vision model to detect smoke from incipient wildfires using terrestrial cameras that can be integrated into the United States Space Force
- Researching different methods to achieve localization of wildfires given a 2D image and finding the geospatial location of the wildfire
- Presenting at Dual Use Innovation Day, an invitation-only gathering of leaders, researchers, and investors to showcase technologies serving both military and civilian needs autonomous systems and AI

MIT Computer Science & Artificial Intelligence Laboratory

October 2024 - Present

iOS/Android/Web Emulator Backend Developer, MIT AppInventor, Dr. Hal Abelson

Cambridge, MA

- Designing new implementations to AppInventor web emulation using GWT and redesigning existing Android features
- Developing new features to both iOS and Android versions of the app such as making charts more readable with color enhancements, rebuilding scrollable views, and adding new block properties in Swift and Java
- Implementing new API calls to retrieve GPS location synchronously from satellite location code calls with Swift

MIT Media Lab

December 2024 - February 2025

Undergraduate Research

Cambridge, MA

- Developed a React app that allows for voice redaction and conversion and editing real-world voice highlights
- Explored a variety of state-of-the-art Voice Conversion (VC) and Text-to-Speech (TTS) models to determine the best performing one and replacing current prototype with API calls to better models
- Connected to ElevenLabs API and MIT's Cortico Fora API to develop backend voice conversion for a larger MIT Center for Constructive Communication development with Python

Extracurricular Activities

MIT Undergraduate Association

October 2024 – Present

Social Chair Officer of 2028 Student Council Board

Cambridge, MA

- Leading, planning, and promoting MIT Class of 2028 events including Freshmen Formal and study breaks
- Manage a +\$20,000 budget and design Class of 2028 merchandise

MIT NCAA Varsity Swim & Dive

August 2024 – Present

Athlete

Cambridge, MA

- Elected as Freshmen Class Representative to coordinate freshmen events such as Freshmen Team Dinner
- MIT School Record Holder in 400 Individual Medley and 500 Freestyle
- 5 Time NCAA All-American

Skills

Programming Python, Java, TypeScript, C, SQL, Swift, HTML, CSS, React.js, Scheme, Android and iOS App Development

AI/Machine Learning NLP, Diffusion Models, PyTorch, Computer Vision, Image Processing, Pandas, CV2, Numpy

Databases MySQL, MongoDB

Software Tools Eclipse, VSCode, GitHub, IntelliJ

Operating Systems Windows, Linux, MacOS

Interests

Piano, Cooking, Music, Poker, Reading, Hiking, Travelling