

Elliot Chen

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EDUCATION

Massachusetts Institute of Technology

M.Eng. in Computer Science and Engineering

Cambridge, MA

Expected Graduation: May 2026

Massachusetts Institute of Technology

B.S. in Computer Science and Engineering, Minor in Finance

Cambridge, MA

Expected Graduation: May 2025

GPA: 4.8/5.0

Relevant Coursework: Algorithms, Machine Learning, Computer Vision, Optimization Methods, Discrete Mathematics, Probability and Random Variables, Differential Equations, Linear Algebra, Corporate Finance

EXPERIENCE

DGV Solutions LP

Quantitative Analyst

Minneapolis, MN

Jun 2024 - Aug 2024

- Researched novel put-write strategies that outperform the S&P 500 Index (SPX) on a risk-adjusted basis.
- Optimized days-to-expiration for main SPX options portfolio to capture greatest volatility risk premia.
- Used machine learning to backtest SPX options trading strategies over a historical 20-year period.

MIT App Inventor

Software Engineer

Cambridge, MA

Aug 2023 - Jan 2024

- Developed Tensorflow.js extensions that integrate AI and machine learning into the App Inventor, a visual programming environment empowering over 6 million students to create their own apps.
- Built iOS compatible data science and AI toolkits using Swift.

National Taiwan University Center for Artificial Intelligence

Machine Learning Researcher

Taipei, Taiwan

May 2023 - Aug 2023

- Designed a convolutional neural network (CNN) based on VGG16 architecture to predict early-onset Parkinson's Disease from brain scans with 85% accuracy. Utilized PyTorch, OpenCV, and MediaPipe.

Rohsenow Kendall Heat Transfer Laboratory

Undergraduate Researcher

Cambridge, MA

Sep 2021 - May 2022

- Characterized monovalent selective electrodialysis (MSED) and nanofiltration systems for nitrate recovery in polluted groundwater using ion chromatography, ICP-OES and Total Organic Carbon analytical techniques.
- Used machine learning to predict experimental carbonate equilibrium and pH changes with 90% accuracy.

PROJECTS

Degradation Methods for Real-World Video Super-Resolution

Mar 2024 - May 2024

- Synthesized a realistic benchmark dataset for real-world video super-resolution, the problem of reconstructing a high-resolution video from its low-resolution counterpart.
- Researched the performance of state-of-the-art diffusion models on newly created dataset.
- Summarized work in a six-page paper and presented findings to a panel of MIT computer vision professors.

PROGRAMMING

Languages: Python, TypeScript, JavaScript, C, C++, Swift, Java, SQL, Matlab

Libraries & Frameworks: PyTorch, NumPy, scikit-learn, OpenCV, MediaPipe, SciPy, Pandas, Node, Git

SKILLS AND INTERESTS

- Proficiency in Mandarin (National Collegiate Chinese Honor Society Member), Swimming (MIT Varsity Swim & Dive team member), Delta Tau Delta Fraternity, MIT Asian American Association (board member)