Elliot Chen

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EDUCATION

Massachusetts Institute of Technology Cambridge, MA
M.Eng. in Computer Science and Engineering *Expected Graduation: May 2026*

Massachusetts Institute of Technology Cambridge, MA
B.S. in Computer Science and Engineering *Expected Graduation: May 2025*
GPA: 4.8/5.0

EXPERIENCE

MIT Institute for Data, Systems, and Society Cambridge, MA
Researcher *Jan 2025 - Present*
- Researching lobbying policy by building a graph neural network to predict relationships between congress, lobbyists, special interest groups, and proposed bills.

DGV Solutions LP Minneapolis, MN
Quantitative Analyst *Jun 2024 - Aug 2024*
- Researched novel put-write strategies that outperform the S&P 500 Index (SPX) on a risk-adjusted basis.
- Used machine learning to backtest SPX options trading strategies over a historical 20-year period.
- Built a Python framework (over 3,000 lines of code) that was deployed internally to test trading strategies.

MIT App Inventor Cambridge, MA
Software Engineer *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.

National Taiwan University Center for Artificial Intelligence Taipei, Taiwan
Machine Learning Researcher *May 2023 - Aug 2023*
- Designed a convolutional neural network to predict Parkinson's Disease from brain scans with 85% accuracy.

Rohsenow Kendall Heat Transfer Laboratory Cambridge, MA
Undergraduate Researcher *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)