
Maximillian Guo
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Education

Harvard University Cambridge, MA
A.B in Computer Science and Statistics. GPA 4.0/4.0.
John Harvard Scholar (2020, 2021, Top 5% of Class). May 2023

Sycamore High School Cincinnati, OH
Valedictorian. USA Math Olympiad (3-time), US Chemistry Olympiad (2-time, Top 50). May 2019

Professional Experience

Harvard University Cambridge, MA
Summer Program for Undergraduates in Data Science Research Fellow May 2021 - Aug. 2022
(advisors: Dr. Weiwei Pan, Prof. Finale Doshi-Velez).

- Analyzing interactions within a deep neural network-based Bayesian model to explain the connections between its parametrization and predictive performance.

Researcher (advisors: Dr. Demba Ba, Bahareh Tolooshams) Mar. 2020 – Aug. 2020

- Designed and implemented deep neural networks based on convolutional dictionary and sparse coding for compressed learning.
- Trained and evaluated several variations of the model on standard image denoising datasets on AWS.
- Visualized reconstructions and frequency content in the Fourier domain.

Teaching Fellow Mar. 2020 – Present

- Taught sections/recitations; created, distributed, graded homeworks; hosted student discussion platforms
- List of courses: CS121 (Theoretical CS), CS181 (Machine Learning), CS182 (Artificial Intelligence), Stat110 (Probability), Stat111 (Statistical Inference), Math101 (Proofs).
- Head Teaching Fellow (TF) for CS182 - assigning and managing TFs for different course duties.

Five Rings Capital New York, New York
Quantitative Trader Intern May 2021 – Aug. 2021

- Used rigorous quantitative and data analysis skills to complete research and development project.
- Participated in mock trading to obtain familiarity with how the market operates at the level of individual orders.

Leadership and Activities

Harvard Association for U.S. China Relations Cambridge, MA
Executive Board, Finance Director Aug. 2021 – Present

- Directing budget of \$200,000 for international conference, community, and organizational expenses.

Executive Board, Conference Director Sept. 2020 – Aug. 2021

- Partnered with nonprofit to host a 5 week long hybrid conference for Chinese students.
- Recruited dozens of professors and student organizations for seminars, panels, and masterclasses.
- Supervised mentorship program involving the completion of student research for each attendee.

Harvard Square Homeless Shelter Cambridge, MA
Resource Advocate Aug. 2021 – Present

- Organizing dozens of client cases on a weekly basis to connect clients with local resources via tracking spreadsheets and resource folders.

Competitions, Independent Projects

Citadel + Correlation One Terminal Challenge. (2021) East Coast Regional Finalist (Top 12).
Stylization of Objects. (2020) Styles objects in images using Mask R-CNNs and neural style transfer.

Skills & Interests

Technical: Python, C++, LaTeX. **Packages:** NumPy, Matplotlib, Pandas. **ML:** Sklearn, PyTorch, TensorFlow.
Language: Mandarin (fluent).
Interests: Piano, Juggling, Calisthenics.