

Benjamin Yan

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Education

Stanford University

Stanford, CA

B.S. IN COMPUTER SCIENCE (AI), B.S. IN MATHEMATICS, MINOR IN CREATIVE WRITING, M.S. IN COMPUTER SCIENCE (AI)

Expected June 2025

- GPA—3.97 / 4.0
- Coursework—CS 224R: Deep Reinforcement Learning, CS 224N: NLP with Deep Learning, CS 330: Deep Multi-Task & Meta Learning, CS 224W: ML with Graphs, CS 229: Machine Learning, Math 275C: Graduate Math in AI, Math 116: Complex Analysis, English 290: Advanced Fiction Writing
- Activities—CS + Social Good (Executive Board); Stanford Science Olympiad (Tournament Committee); Stanford MATH 18-21, 51 (SUMO Tutor)
- Study Abroad at University of Oxford—Visiting Student in English Literature and Creative Writing (A+ in Intensive Tutorial), Hilary Term 2024

Work Experience

Harvard Medical School

Boston, MA

VISITING RESEARCH FELLOW, ADVISED BY PROF. PRANAV RAJPURKAR

Jan. 2023 - Jan. 2024

- First author of paper published in EMNLP 2023 Findings, and presented at the EMNLP main conference—one of the leading venues in NLP.
- The paper (*Style-Aware Radiology Report Generation with RadGraph and Few-Shot Prompting*) has been cited by Google DeepMind and Microsoft Research in a pair of technical reports on healthcare foundation models, and featured at Radiological Society of North America (RSNA) 2023.
- Led a research project to enhance clinical accuracy in radiology report generation—through a novel two-step paradigm of knowledge graph (RadGraph) guided vision transformers to extract information from chest X-ray images, and text style adaptation with large language models.

NVIDIA

Santa Clara, CA

SOFTWARE ENGINEERING INTERN, CUDA MATH LIBRARIES

Jun. 2022 - Sep. 2022

- Parallel C++ scientific library development in the CUDA Toolkit, widely employed in modern AI and deep learning stacks.
- Leveraged CUDA kernel decompositions and link-time optimizations to accelerate Fast Fourier Transforms on GPUs, along with compressing library binary size for shipping to mobile devices; presented results (covered by NDA) at the intern poster session.

Stanford Artificial Intelligence Laboratory (SAIL)

Stanford, CA

CLIMATE AI BOOTCAMP RESEARCHER (30 HRS/WEEK), ADVISED BY PROF. ANDREW NG

Jan. 2023 - Dec. 2023

- Developed and deployed PyTorch models to comprehensively map sources of methane (landfills, factory farms), in global, terabyte-scale satellite imagery (~1 million high-res images). Paper in progress.
- Collaborated with Planet Labs and non-profit Carbon Mapper, who employ our results to guide their currently orbiting methane satellites.

Stanford Department of Computer Science

Stanford, CA

LEAD INSTRUCTOR, CS 106S: CODING FOR SOCIAL GOOD

Jan. 2023 - present

- Teaching a Stanford course (cs106s.stanford.edu) on applying JavaScript to social good e.g., health AI, climate science, cybersecurity, safety.
- Developed and taught lectures; managed website, grades, and roster (up to 30 undergrads each quarter); helmed team of student instructors.

Stanford Network Analysis Project (SNAP) Group

Stanford, CA

CURIS UNDERGRADUATE RESEARCHER, ADVISED BY PROF. JURE LESKOVEC

Jun. 2023 - Mar. 2024

- Devised temporal hyper-graph neural networks (GNNs) to investigate propagation of disruptions on global supply-chain networks—in collaboration with Hitachi Research—and built codebase to interface Python with SQL databases, for querying billions of worldwide trade records.
- Poster presented at Stanford Graph Learning Workshop 2023, completed CS191W senior capstone project. [Research paper in progress.](#)

Stanford Natural Language Processing (NLP) Group

Stanford, CA

25% RESEARCH ASSISTANT UNDER GOOGLE GRANT, ADVISED BY PROF. CHRISTOPHER POTTS

Feb. 2022 - Jun. 2022

- Built and scaled deep image-to-text models on vast datasets of Wikipedia images, in collaboration with Google AI Research—incorporating pragmatic context to improve the quality and relevance of visual descriptions.

Honors & Awards

- 2020 **U.S. Presidential Scholar**, one of 161 selected from ~ 3.6 million graduating seniors nationwide
- 2023 **National Novel Writing Month Winner**, wrote a 94000-word / 320-page novel in a single calendar month
- 2020 **MN State Math Champion**, 1st place individual in the Minnesota State High School Math League
- 2020 **2-Time International Science and Engineering Fair (ISEF) Finalist**, 2019 and 2020

Skills

Languages: English (bilingual), Mandarin Chinese (bilingual), Japanese (elementary proficiency)

Programming: Python (PyTorch, Tensorflow, Keras, Pandas, Matplotlib, SciPy), SQL, C++/CUDA, HTML/CSS, JavaScript

Tools: Conda, Vim, Amazon Web Services EC2, Azure Cloud Services, Docker, Git, CircleCI, OpenAI API, MuJuCo