

Aaron Hsieh

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Education

University of Pennsylvania , M.D.	Aug 2025 - June 2029
• Activities: VP of Curriculum @ PennHealthX, Admissions Interviewer	
New York University , B.S. in Computer Science	Sep 2019 – May 2023
• GPA: 3.9/4.0	
• Minors: Mathematics and Biomolecular Science	
• Activities: NYU Engineering Honors Program (20 members each year), NCAA D3 Varsity Swimming, Grader for Discrete Mathematics and Linear Algebra & Differential Equations	

Research

Medical Student Researcher , University of Pennsylvania – Philadelphia, PA	October 2025 - Present
Advisor: <i>Cassandra Ligh, MD</i>	
• Developing iOS game for rehabilitation assistance for patients with facial paralysis	
Advisor: <i>Daniel Hashimoto, MD</i>	
• Assessing VLM alignment with expert reasoning for endoscopic surgeries	
• Investigating representation-engineering for alignment and reasoning evaluation of surgical LLMs	
Undergraduate Researcher , New York University – New York, NY	Mar 2020 - May 2023
Advisor: <i>Zhe Sage Chen, PhD</i>	
• Trained a parametric convolutional neural net on raw EEG data for risk prediction of epilepsy condition	
• Wrote feature engineering pipelines to preprocess noisy EEG data and extract biomarkers for ML models	
• Achieved an AUC of 0.87 by adding signal complexity features, an improvement over a paper that we previously published (AUC=0.77)	

Industry

Software Engineer , Bloomberg – New York, NY	Aug 2023 – Apr 2025
• Re-architected an internal classification pipeline from scratch, reducing code complexity from ~15000 to 2000 lines of code and runtime from 14 to 2 days	
• Redesigned company-wide data management system to be more efficient and scalable with database and API design	
• Used Airflow to orchestrate end-to-end classification of internal data with regex and machine learning	
• Implemented a recurring Python task to identify unclassified internal data, revealing 50% of data assets were unclassified and improving regulatory compliance	
Software Engineer Intern , Snap Inc. – New York, NY	May 2022 – Aug 2022
• Created command line interface tool for offline graph execution, reducing MLE testing time from weeks to minutes	
• Added graph execution component for fetching and returning lens features from BigTable	
• Built new retrieval source for contextual lens recommendation system based on visual embedding cosine similarity, increasing count of unique lenses (OKR) by over 300%	
Software Engineer Intern , Facebook (now Meta Platforms, Inc.) – Menlo Park, CA	May 2021 – Aug 2021
• Authored data pipelines that processed 900+ billion rows and reduced compute usage by 50% with efficient SQL	
• Implemented Python backend for including profile pictures in Instagram friend suggestion notifications, increasing click count by 3.8% and click rates by 1.8%	
• Enhanced Python infrastructure to support sparse features and deployed ranking models, increasing follows by 1.8%	

Publications

Zhe S. Chen, **Aaron Hsieh**, Guanghao Sun et al. (2022) Interictal EEG and ECG for SUDEP Risk Assessment: A Retrospective Multicenter Cohort Study. *Frontiers in Neurology*.