Andy Ye

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Education

University of Washington — Seattle, WA

B.S. in Computer Science - Expected June 2028

GPA: 3.52, Deans List(Fall, Winter 2025)

Relevant Coursework: Data Structures and Algorithms, Systems Programming, Hardware Software Interface, Linear Optimization, Probability, Interaction Programming, Software Design and Implementation

University of Pennsylvania — Philadelphia, PA

Summer Program in 2024. Took microeconomics, GPA 3.7

Boston University — Boston, MA

Summer Program in 2023. Took Linear Algebra and Creative Writing, GPA 3.7

Experience

Undergraduate Researcher — Allen Institute for AI (Ai2), with Matt Wallingford

October 2025 – Present

- Built an automated pipeline to convert real estate walkthrough videos into data for a CV dataset, processing 10,000 videos into 125,000+ clips with continuous motion trajectories for AI navigation.
- Developed trajectory extraction algorithm that identifies navigable camera paths by tracking 3D endpoint visibility across frames using depth maps and camera pose estimation.
- Implemented floor-point detection via ray-casting to extract walkable destination coordinates.
- Scaled pipeline to process over 5 TB using SLURM job arrays for parallel VGGT inference.

Undergraduate Researcher — Ubiquitous Computing Lab, UW CSE, with Richard Li

October 2025 – Present

- Implemented Bernoulli Level Set Estimation (LSE) with AI (Gaussian Process) models to optimize Critical Flicker Frequency (CFF) threshold detection for BEACON, a mobile health diagnostic tool.
- Evaluated acquisition functions (EAVC, GlobalMI, LocalMI) to minimize patient trial burden while maintaining diagnostic accuracy. Built person-specific Oracles for testing accuracy.
- Developing Python-based simulation framework to benchmark adaptive psychophysical testing methods against traditional staircase and forced-choice protocols. Developing an app to run human trials.
- Achieved 55-trial average reduction (from 40–120 down to 20–30) while maintaining accuracy.

Projects

Catfish — *Python, Azure, Meta & LinkedIn API*

March 2025 – Present

Building a tool to summarize interviewer profiles for application search

- Created an algorithm to scrape publicly available data via Linkedin and Meta API based on a person's name, position, and their company.
- Created a website and algorithm to provide a quick generated list of 'things to know' for conversation topics with that person during the upcoming interview.

HeLU-DTI — *Python, Pytorch, HGNN, NLP*

July 2023 – August 2024

Used large language models and heterogeneous graph neural networks to predict drug-target interactions

- Used LLM's for embedding generation with SMILES and amino acid sequences, for diseases, drugs, proteins, and disease phenotypes. Demonstrated that the amount of modalities is scalable.
- Used a heterogenous graph neural network - nodes as the modalities - with message passing allowing the modalities to see beyond one round of neighbors. 93.7% with AUPRC, 73.2% with unseen testing.

Awards/Honors

- 4th Place Grand Award at ISEF, in Computational Biology and Bioinformatics - Regeneron, 2023
- 1st Place in Computational Biology - Washington State Science and Engineering Fair 2023
- Certificate of Achievement - Wolfram Computation Meets Knowledge, 2023

Skills

Languages: Python(Strong), Java(Strong), C(Intermediate), C++(Intermediate), R, Javascript

Tools/Misc: PyTorch, React, GNNs, LLMs, VLMs, English/Mandarin/Spanish, Can spin pens.