

# Aiden Zhou

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## EDUCATION

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### Yale University

Expected May 2028

Bachelor of Science in Computer Science and Mathematics

GPA: 4.0/4.0

- **Relevant Coursework:** Data Structures, Algorithms, Computational Vision, Deep Learning for Graph-Structured Data, Linear Algebra, Discrete Math, Prob. Theory, Real Analysis, Fourier Analysis

## EXPERIENCE

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### Math Teaching Assistant | *Yale University* | New Haven, CT

Aug. 2025 – Present

- Lead open office hours, group workshops, and 1-on-1 tutoring for Calculus I and II, helping 100+ students master key concepts, proofs, and computational techniques

### Research Intern | *Wu Tsai Institute at Yale University* | New Haven, CT

Jan. 2025 – Oct. 2025

- Developed and tested inverse graphics vision models using PyTorch, Nvdifffrast, and MATLAB
- Designed an end-to-end ETL pipeline to clean and regularize 50+ GB (60+ patients, 85 tasks) of ECoG data, storing voltage transients in CSV/JSON snapshots to detect and analyze electrodes of interest
- Ran distributed GPU workloads with CUDA and Slurm, yielding ~5-fold reductions in manual workload

### Machine Learning Researcher | *Algoverse AI* | Remote

May 2025 – Aug. 2025

- Authored and presented research paper at MechInterp @ NeurIPS, a top workshop for technical AI safety research, and led underlying project to uncover persistent trends in model evolution
- Leveraged experience in PyTorch, scikit-learn, Transformers, and NNSight to extract and cluster neuron activations over 143 checkpoints of Pythia language models; developed web app to visualize results

## LEADERSHIP

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### Data Editor, Managing Board | *Yale Daily News* | New Haven, CT

Sept. 2024 – Present

- Mentor a desk of 15 student reporters; pitch and edit enterprise stories and organize weekly check-ins
- Design graphics for print and develop interactive tools (maps, dashboards) for the YDN website
  - Graphed and mapped every Clery Alert sent by Yale Public Safety over the past 4 years
  - Scraped food reviews from the Yale Menus app to create a searchable database of ~1,000 entrees

## PROJECTS

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### NeuronEvolution: Tracking LLM Features over Pre-Training (<https://neuronevolution.streamlit.app>)

- Developed and deployed a web app tracking the top-activating feature clusters of 1,200+ neurons in Pythia language models over 143 pre-training checkpoints
- Built Python-based backend; used Snowflake and AWS to ingest model activations into data warehouse

### Data Journalist Portfolio (<https://www.clippings.me/users/aidenzhou>)

- Produced in-depth analyses and investigations for the Yale Daily News, conveying data-driven insights on topics such as voter registration, student life, and sports analytics via interactive graphics and clear prose

## SKILLS

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- **Languages:** Python, C/C++, Java, JavaScript, MATLAB, SQL, HTML/CSS, Racket, Bash
- **Libraries and Tools:** Pandas, PyTorch, scikit-learn, spaCy, CUDA, FastAPI, React, Tailwind
- **DevOps:** AWS, Git, GitHub Actions (CI/CD), Docker, Kubernetes, Weights & Biases, HPC scripting

## HONORS AND AWARDS

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- **Yale First-Year Research Scholarship in the Sciences and Engineering (2025):** \$5,000 grant for research on Bayesian modeling, NeuroAI, and inverse graphics vision models
- **Science Olympiads (2022–2024):** 3x AIME, CMO, 2x UBC Physics gold medal
- **Competitive Chess:** Achieved US National Master title and peak age group ranking of 6th in the world