

Andrew S. Wong

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Education

University of Pennsylvania May 2027

B.S.E. in Artificial Intelligence, minor in Neuroscience *Cumulative GPA: 3.95*

M.S.E. in Bioengineering

Honors and Awards: Engineering Entrepreneurship Fellow, Eta Kappa Nu

Relevant Coursework: Data Structures and Algorithms, Machine Learning, Deep Learning, Computer Vision, Statistics for Data Science, Software Engineering, Web Development, Linear Algebra, Probability

Skills and Interests

Programming Languages: Python, Java, JavaScript/TypeScript, Go

Data Science & ML: PyTorch, NumPy, SciPy, Pandas, scikit-learn

Frontend: React Native, HTML/CSS, Vite, Next.js, Tailwind

Backend & Systems: Node.js, Git, Jupyter, CI/CD, REST API

Languages: Cantonese (native), Mandarin (native), German, Indonesian

Other Interests: Video editing, singing, travelling, ziplining, brain-computer interface, mind hacking

Engineering Experience

Research & Data Engineer Intern, Kahana Computational Memory Lab May 2025 – Present

- Preprocess and analyze 350+ high-dimensional EEG datasets with Python, extracting time-frequency features and identifying theta-band spectral patterns associated with memory encoding.
- Develop a retrieval-augmented generation system integrating document parsing, vector embedding, and a local LLM to enable efficient and secure semantic search of internal database.

Research Assistant, Computational Cognitive Neuroscience Lab Jan 2024 – Feb 2025

- Engineered a recurrent neural network in Go to model mechanisms underlying NREM2 sleep-dependent memory consolidation.
- Conducted statistical analyses and data visualizations using Python and Pandas to validate sleep spindle activity during NREM2 sleep.

Web Developer, Civic House at the University of Pennsylvania Oct 2023 – Oct 2024

- Revamped web interface with HTML, CSS, and JavaScript, increasing site traffic by 76%.
- Conducted UX tests and user feedback sessions to improve accessibility for diverse student users.

ScholarSearch Chrome Extension Project Mar 2025 – May 2025

- Engineered a full-stack research retrieval system combining Semantic Scholar's API with GPT-3.5 relevance scoring, enabling natural-language ranking of abstracts and increasing retrieval precision by 48%.
- Developed a FastAPI backend hosted on Render for data fetching, and built a modular React/TypeScript frontend using Vite for optimized bundling and fast development workflows.

Leadership and Activities

Teaching Assistant, Introduction to Cognitive Science Aug 2025 – Present

- Design interdisciplinary course materials on neural networks, theory of mind, and natural language, integrating AI and neuroscience models to build conceptual understanding for 200+ students.

Business Manager and Singer, Penn Glee Club Sept 2023 – Present

- Directed 20+ high-profile performances, coordinating 65+ members and managing logistics while leading sponsorship outreach and pitching partnership proposals that generated \$9.6K in revenue.

Co-Founder, Memory Advocacy & Research Society Mar 2024 – Aug 2025

- Led cognitive training workshops and produced exclusive interviews with USA Memory Championship experts, promoting research-based memory enhancement to 16K+ viewers across platforms.

Food Service Volunteer, Ronald McDonald House Philadelphia Jul 2024 – Aug 2025

- Prepared and served nutritious meals for 250+ resident families, fostering community well-being and a welcoming environment for children undergoing hospital care.