

MACLANE ZICH

(708) 733-2707 | maclane@engineering.upenn.edu | [linkedin.com/in/maclanezich](https://www.linkedin.com/in/maclanezich) | github.com/MaclaneZich

EDUCATION

University of Pennsylvania, School of Engineering and Applied Science

Philadelphia, PA

B.S.E. in Artificial Intelligence, Health Systems Concentration

May 2030

AI ENGINEERING EXPERIENCE

Northwestern Medicine, Institute for Artificial Intelligence in Medicine

Chicago, IL

AI Engineer and Manuscript Co-Author

Feb 2026 – Present

- Built the LLM layer of a voice AI that scores medication adherence across 4 clinical domains (Python, FastAPI)
- Cut inference cost 60–80% by building a failover router across 3 LLM vendors with a structured-output schema
- Produced the paper's failure taxonomy by running a 24-conversation, 12-persona evaluation harness

Perelman School of Medicine, Rajapakse Radiology Lab

Philadelphia, PA

Undergraduate Researcher, Medical Imaging AI

Sep 2026 – Present

- Building the labeled training set for a PyTorch model automating knee MRI landmark measurement
- Quantifying label noise as the model's accuracy ceiling by running ICC and Bland-Altman analysis

PsychNow

Chicago, IL

Software Engineer Intern

Mar 2025 – Aug 2025

- Cut clinical validation cycles 86% by building a TypeScript patient-simulation suite for a psychiatric intake model
- Enabled onboarding of Yale Medicine physicians by designing branching JSON personas with audio triggers for edge cases

SHIPPED AI PRODUCTS

Nárm

Aug 2025 – Present

Technical Co-Founder and Sole Engineer

- Built an iOS app that identifies fibers from a photo of a garment or care label and flags irritants
- Reached 98% label and 94% fiber-composition accuracy on held-out images with a dual-path Gemini vision pipeline
- Shipped the full stack solo on Flutter, Firebase, and Vertex AI; project presented as Harvard Medical School Capstone
- Drove 160+ downloads and 12 paid subscribers at 17.5% launch-week conversion

HeadacheWise

Feb 2024 – Present

Founder

- Built an iOS app where migraine patients log episodes and triggers and learn which combinations actually cause attacks
- Surfaced actionable triggers for 180+ users by building an on-device association-rule engine ranking combinations by lift
- Scaled to 2,000+ logged episodes with a Bayesian time-series research mode; demoed at the U.S. Capitol, April 2026

LEADERSHIP

Chicago Youth Advancement Initiative

Jan 2024 – Present

Co-Founder, 501(c)(3) STEM Nonprofit

- Founded a nonprofit teaching computer science to underserved youth across Chicago Youth Centers and Public Schools
- Delivered 400+ teaching hours to ages 9–12 by authoring coding and robotics curricula and raising \$8,000+ in grants

Engineering Deans' Advisory Board

Sep 2026 – Present

Board Member, Penn Engineering: 1 of 6 first-years selected from 100+

HONORS

- Coca-Cola Scholar, 2026: 150 selected from 107,000+ applicants nationwide
- Congressional App Challenge Winner, 2026: awarded for HeadacheWise
- National Merit Scholar, 2026: 2,500 selected from 1.6M entrants

TECHNICAL SKILLS

AI / ML: LLM integration and evaluation, computer vision pipelines, PyTorch

Languages: Python, TypeScript / JavaScript, Dart, SQL

Systems: FastAPI, Node.js, Firebase, Google Cloud

Practices: Model evaluation, simulation-based validation, statistical analysis, Git