Miguel Aenlle

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EDUCATION

University of Illinois, Urbana-Champaign — Expected: May 2027
Bachelor of Science in Computer Science — *Cumulative GPA: 4.0/4.0*
- Coursework: Data Structures, Computer Architecture, C++, Rust, Linear Algebra, Statistics, Discrete Math, Multivariable Calculus, Object-Oriented Programming, University Physics: Mechanics, Electricity and Magnetism
- Honors and Awards: Provost Scholar (Full-Tuition Merit Scholarship), James Scholar

RESEARCH EXPERIENCE

Undergraduate Researcher — Oct. 2024 – Present
Health Care Engineering Systems Center — *Urbana, IL*
- Engineered immunization algorithm to inject imperceptible noise into audio, disrupting DeepFake generation
- Created novel diffusion-based computer vision model to redirect an image subject's eye gaze and head orientation
- Utilized large vision models, diffusion models, PyTorch, OpenCV, and Weights and Biases to develop technologies

Undergraduate Researcher — Sep. 2024 – Dec. 2024
URSA (Undergraduate Research for Scientific Advancement) — *Urbana, IL*
- Built iOS app that transforms videos based on user prompts with SwiftUI and RAVE Computer Vision Model
- Engineered AI video processing backend using Python, PyTorch, Flask, Google Cloud, and NVIDIA GPUs

PROFESSIONAL EXPERIENCE

Software Engineering Intern — Dec. 2024 – Present
PrairieLearn — *Champaign, IL (Remote)*
- Revamped course navigation system across 80+ pages, enhancing usability of PrairieLearn's instructor platform
- Optimized instructor onboarding for 750+ university courses, boosting engagement with core platform features
- Developed features with TypeScript, Express, Python, and PostgreSQL, and collaborated via GitHub and Slack

Software Engineering Intern — Jun. 2023 – Aug. 2023
PathwayOS — *Denver, CO (Remote)*
- Built experience matching system for 500,000-student platform using React, CSS, TypeScript, Swift, and MySQL
- Iterated features based on feedback and peer reviews from engineering and product teams with GitHub and Slack

Software Engineer — Aug. 2022 – Jan. 2025
Normandy Remodeling — *Hinsdale, IL (Remote)*
- Developed custom platform managing logistical and financial data on 33,000+ customers and 9,000+ projects
- Programmed invoicing system handling 300+ invoices/week via dashboard, file generators, and email automations
- Leveraged React, CSS, Node.js, Express, and MongoDB; integrated with MS Office via Azure and MS Graph API

PROJECTS

Co-Founder, iOS and Computer Vision Engineer — Dec. 2024 – Present
360Learn — *Remote*
- Developed app enabling autism specialists to create immersive skills training experiences for autistic students
- Utilized PyTorch and vision models for panoramic backdrop generation, and YOLOv5 for image segmentation
- Developed backend with Azure; submitted to international, 8,000+ participant competition Microsoft Imagine Cup

Co-Founder, iOS Engineer — Aug. 2022 – Jan. 2025
EasyMeal — *Hinsdale, IL (Remote)*
- Engineered app that instantly finds healthy, accessible meals from 12,000 recipes with a user's kitchen ingredients.
- Implemented AI "Speak Ingredients" feature to transcribe statements & search 1000s of recipes in under 1 second.
- Won Apple's Student App Design Challenge for HS District 214. Presented at Apple's Chicago Flagship Store.

Leadership and Activities

Web Developer
HackIllinois
Sep. 2024 – Present
Urbana, IL
- Developed HackIllinois 2025 Event Website for use by 1,000+ students with React, SCSS, and TypeScript
- Utilizing Notion, GitHub, and CloudFlare CI/CD to develop features collaboratively with developers and designers

Founder and Lead Organizer
HSHacks
Dec. 2022 – May 2024
Arlington Heights, IL
- Led fundraising, marketing, programming, and logistical organization of HSHacks 2023 and 2024 hackathons
- Hosted 120+ student attendees from 40+ Chicago-area schools in 2024. Featured on local news
- Directed 8-student team in acquiring $45,000 in funds and software/technology prizes from 17 corporate sponsors

Founder and Director
Hersey Developers
Dec. 2022 – May 2024
Arlington Heights, IL
- Partnered with HS District 214 (D214) to launch academically-accredited Computer Science internship program
- Directed 30 interns with 3 team-leads through React, Node.js, and MongoDB courses and creation of 4 websites
- Led Agile team sprint planning, stand-up meetings, code reviews and pair programming sessions

Founder and Director
Hersey Hack Club
Dec. 2022 – May 2024
Arlington Heights, IL
- Founded and led 50+ member CS club, the largest student-led organization at John Hersey High School.
- Hosted weekly CS workshops on web development and machine learning using HTML, React, and Python.

Awards and Honors

Provost Scholar
University of Illinois, Urbana-Champaign
Feb. 2024
- Received full-tuition merit-based scholarship for placing in the top 1% of academic and extracurricular accomplishments amongst 9,000+ incoming University of Illinois 1st-year students

James Scholar
University of Illinois, Urbana-Champaign
Feb. 2024
- Selected for placing in the top 10% of incoming UIUC CS students for academic and extracurricular achievement

National Merit Finalist
National Merit Scholarship Corporation
Feb. 2024
- Placed in the top 0.5% of over 1.5 million United States students in the PSAT NMSQT and SAT exams.

Internship Impact Award
John Hersey High School
Jan. 2024
- Awarded John Hersey High School's internship impact award for leading Hersey Developers to become Township High School District 214's largest internship partner, at 30 interns total from all 6 District 214 schools.

Presidential Volunteer Service Award (PVSA) - Gold
US President's Volunteer Service Awards
Dec. 2023
- Awarded for volunteering 280+ hours leading the JHHS Hack Club, Hersey Developers, and HSHacks Hackathon

Mobile Makers National Summit Speaker
MobileMakersEdu
Nov. 2023
- Selected to speak at EdTech nonprofit Uncharted Learning's Mobile Makers National Summit
- Featured on Mobile Makers' Nationwide Student Spotlight

Apple Student App Design Challenge Winner
Apple, Inc. and Township High School District 214
May 2023
- Developed EasyMeal, one of 6 winning apps of 70+ at the D214 App Showcase
- Presented at Apple's Flagship Chicago Store

Technical Skills

Languages: TypeScript, JavaScript, SQL, Python, HTML, CSS, Swift, Java, Dart, C++
Technologies/Frameworks: React.js, Node.js, Express, MongoDB, MySQL, Azure, GCP, SwiftUI, Flutter, Git, GitHub, CI/CD, Jest, Supertest, Agile, PyTorch, OpenCV, Numpy, Pandas, Matplotlib, OpenAI, spaCy NLP, NLTK