# Miguel Aenlle

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## EDUCATION

**University of Illinois at Urbana-Champaign**                      Expected: May 2027
*Bachelor of Science in Computer Science*                      *Cumulative GPA: 4.0/4.0*
- Honors: Provost Scholarship (Full-tuition Scholarship); UIUC Research Park Most Outstanding Intern Award (1 of 800 selected); Engineering Visionary Scholarship; GFX Innovation Scholar; James Scholar; Dean's List 2024/2025
- Relevant Coursework: Data Structures and Algorithms, Database Systems, Deep Learning, Computer Vision, C++, Java, Computer Architecture, Numerical Methods, Discrete Structures, Linear Algebra, Probability and Statistics

## PROFESSIONAL EXPERIENCE

**Software Engineering Intern, PrairieLearn, Inc.**                      Dec. 2024 – Present
- Engineered image-capture API delivering **1ms** captures for **180,000** students in high-stakes exams & assessments
- Accelerated manual grading process from **1 week to 1 hour** by creating LLM-driven handwriting grading pipeline
- Implemented UIs and API endpoints with TypeScript, React, HTML, CSS, WebSockets, PostgreSQL, and Python
- Redesigned staff navigation system across **80+** pages, enhancing experience for over **2,000** course instructors

**Software Engineering Intern, PATHWAYos**                      Jun. 2023 – Aug. 2023
- Created work-based learning experience matching system for **500,000**-student platform with React & TypeScript
- Built low-latency Swift/MySQL API for opportunity matching via preferences, location, experience, & availability
- Iterated features based on feedback and peer reviews from engineering and product teams with GitHub and Slack

**Software Developer, Normandy Remodeling**                      Aug. 2022 – Jan. 2025
- Architected cloud-based platform managing logistical and financial data on **33,000** customers and **9,900** projects
- Built frontend with React, CSS, and TypeScript, and backend with Node.js, Express, MongoDB, Jest, and Azure
- Automated document, email, and invoicing workflows for **100 employees** via Azure & OneDrive/Office 365 APIs

## RESEARCH EXPERIENCE

**Software Developer, Google Summer of Code – Emory University**                      Jun. 2025 – Present
- Engineered ML pipeline to train and optimize automated MRI segmentation models with OpenCV and PyTorch
- Expanded limited proprietary training data by **1,600%** via custom-trained, state-of-the-art generative AI models
- Improved segmentation accuracy from **39%** to **80%**. Collaborated with Google and Emory University researchers

**Undergraduate Researcher, University of Illinois Urbana-Champaign**                      Oct. 2024 – May 2025
- Developed AI model to inject imperceptible noise into audio, disrupting malicious audio deepfake attacks
- Implemented GPU-accelerated PyTorch pipeline for training and optimizing the model on **1,000+** speakers
- Collaborated with UIUC, Google, and Meta AI researchers to develop the audio defense technologies

## LEADERSHIP AND ACTIVITIES

**Web Team Lead, HackIllinois**                      Jul. 2025 – Present
- Leading redesign of site, registration, and admin web systems for UIUC's **1,000+** attendee flagship hackathon
- Revamping admin site, implementing features to streamline applicant, event, and sponsor data management
- Engineering web-based platform to automate corporate outreach task management across over **500** contacts

**Software Developer, Reflections Projections**                      Mar. 2025 – Present
- Revamped sponsor resumebook, enhancing search, secure export, and rapid navigation of **2,000+** resumes
- Developed interactive, bespoke schedule, speaker, and Q&A pages for Midwest's largest collegiate tech conference

**Software Developer, HackIllinois**                      Sep. 2024 – Mar. 2025
- Created site and registration system used by **1,000+** students and attendees with React, TypeScript, and NextJS
- Leveraged Notion, Figma, and GitHub to develop features collaboratively with developers and designers

## TECHNICAL SKILLS

**Languages**: TypeScript, JavaScript, Python, C++, SQL, Swift, Java, HTML, CSS, Dart, MIPS, Verilog
**Full-Stack**: React, NextJS, NodeJS, Express, Django, REST APIs, WebSockets, MongoDB, MySQL, PostgreSQL, Redis
**Data Science / AI**: Python, PyTorch, OpenCV, NumPy, Pandas, Matplotlib, OpenAI, spaCy NLP, NLTK, Scikit-learn
**Other**: Git, GitHub, CI/CD, GitHub Actions, Firebase, Google Cloud, Jest, Agile, Linux, SwiftUI, Flutter, Azure