

# Ethan Marshall

Miami, FL · (313) 605-9030 · ethanm938@gmail.com  
ethan-marshall.com · github.com/BaBingoBango · linkedin.com/in/ethan-marshall92

PhD student building safety infrastructure for clinical and companion conversational AI — runtime conformance monitoring, machine-adapted fidelity instruments, and the evidence layers new chatbot laws demand. Seeking summer 2027 internships in AI safety, safeguards, and evaluation engineering.

## EDUCATION

**University of Miami**, Coral Gables, FL Aug 2025 – present (expected Apr 2029)  
*Ph.D., Computer Science — Advisor: Dr. Ubbo Visser*

**University of Michigan**, Ann Arbor, MI Aug 2021 – Dec 2024  
*B.S.E., Computer Science — GPA 3.64; University Honors; Dean's List*

## RESEARCH EXPERIENCE

**University of Miami, Department of Computer Science**, Coral Gables, FL Aug 2025 – present  
*Graduate Research Assistant — Advisor: Dr. Ubbo Visser*

- Clinician-validated fidelity instruments adapted for machine-generated text, plus lightweight runtime monitors that flag protocol violations during a conversation rather than in an audit afterward.
- Designed and ran pre-registered pilot studies evaluating LLM counselors, with dual cross-family labelers.
- First-author paper under double-blind review (2026); available on request.

**University of Michigan, Dynamic Project Management Lab**, Remote Jun 2024 – Aug 2025  
*Research Assistant — Civil & Environmental Engineering; PI: Dr. SangHyun Lee*

- Built the SwiftUI app and Python data pipeline for a construction-worker fatigue-detection study (Bluetooth wearable), deployed at multiple Ann Arbor construction sites; shipped a second React Native + Firebase study app.

## PROFESSIONAL EXPERIENCE

**Franklin-Bingham Fire Department**, Franklin, MI (Hybrid) Aug 2024 – Sep 2025  
*Full-Stack Developer*

- Built and shipped a React Native app (front end + back end) giving firefighters one-tap access to 300+ critical phone numbers, locations, and data items; ran usability testing and deployed via iOS/Android enterprise distribution.

**Radiance Technologies**, Dayton, OH (Remote) Jun 2023 – Aug 2023  
*Modeling & Simulation Intern*

- Designed and implemented a custom package system (Rust, C++), including a variant of the standard package-resolution algorithm, that made a military 3D simulation program accessible to non-technical users across 275+ organizations.

**Radiance Technologies**, Dayton, OH (Remote) Jun 2022 – Aug 2022  
*Modeling, Analytics & Simulation Sciences Engineer Intern*

- Built new Qt/C++ interfaces for Air Force simulation software and added a suite of cybersecurity simulation tools; granted a DoD Top Secret clearance.

**Apple**, Novi, MI — *Sales Specialist*. Built Metrics for Product Zone, an Apple Retail metrics app (v2.0, 2026) Summer 2021

## SELECTED PROJECTS & AWARDS

- Fireteam** — Apple WWDC26 Swift Student Challenge Winner (2026). Drag-and-drop multi-agent system builder for LLMs with draggable "safeguard nodes" that teach LLM-safety concepts (SwiftUI).
- DYTM** — Deterministic verification layer for LLM code generation (2026). PBT contracts between user intent and generated code (Python, LangGraph, Hypothesis); evaluated on HumanEval and a 50-task agent-to-agent study.
- Pixel Pursuit** (WWDC23) and **One Step Ahead** (WWDC22) — Swift Student Challenge Winners: AR forensics game; Core ML drawing game.
- CORE** — Co-founder & technical lead (2022–2025). Clinical-research access platform (SwiftUI, Next.js); \$14.5k in awards.
- Live on the App Store: Fireteam, Chorale, Liftgraph, Metrics for Product Zone, StreakPal, and The Mood Meter!

## TEACHING EXPERIENCE

**University of Miami** — Teaching Assistant since 2025: programming, data structures, AI, and robotics courses.

## SKILLS

**Languages:** Python, Swift, C/C++, Rust, JavaScript

**ML & evaluation:** classifier training/evaluation, LLM evaluation & annotation pipelines, inter-rater reliability, pre-registered studies, Core ML

**Frameworks & platforms:** SwiftUI, RealityKit, React Native, Next.js, Firebase, Qt, Git; App Store & enterprise distribution