

Joshua Jimenez

jjime73@illinois.edu | [linkedin.com/in/jjime](https://www.linkedin.com/in/jjime) | github.com/cleanpxe | Chicago, IL

EDUCATION

University of Illinois Urbana-Champaign

BS in Systems Engineering and Design, Minor in Computer Science

Urbana, IL

Expected May 2028

- **Coursework:** Business Side of Engineering, Analysis of Data, Data Structures, Linear Algebra, Discrete Structures; *in progress:* AI-Driven Intelligent Systems, System Programming, Control Systems

LEADERSHIP

Product Lead, Product Space UIUC

Product Fellowship (6% acceptance rate); student product-consulting organization

Feb. 2026 – Present

Urbana, IL

- Developed a U.S. go-to-market strategy for an international games company via market research and segmentation

Client: Brownlee Lighting | 12-week additive-manufacturing feasibility engagement

Sep. – Dec. 2026

- Co-lead a six-person consulting team across three phases; own the feasibility track; delivered Phase 1 on schedule
- Enforce a three-hour weekly budget per consultant with per-item minute estimates and rule-based overflow
- Run the weekly call with the client's Head of Product Strategy, turning each into decisions and deliverables within 48 hours; drove the scope change to filament FFF when the client dropped its planned machine
- Own the business case: a sourced cost-per-shade model, an in-house vs. outsourced crossover-volume analysis, and a weekly risk register; reframed the recommendation as in-house vs. outsourced vs. split by size
- Coordinated the first vendor quote request (2 nozzle sizes $\times$ 4 volume bands) as the key make-vs-buy input; sourced a second recycled-PETG supplier to remove single-source risk
- Led development of a parametric shade generator (Python, Fusion 360 API) that turns a spreadsheet row into STLs
- Built the team's knowledge system: a git-tracked Obsidian vault with an embedded AI agent (Claude Code) under a written operating manual, live dashboards, and a [VERIFY] rule that keeps unsourced numbers out of client work

EXPERIENCE

Autonomous Systems Research Assistant

Center for Autonomous Construction and Manufacturing at Scale (CACMS)

Apr. 2026 – Present

Urbana, IL

- Lead perception for a soil-moisture sensing system for autonomous construction vehicles (6 W compute budget); own the lab's Clearpath Husky A200 robot stack, from tethered teleoperation to autonomous navigation
- Run decisions through 25+ architecture decision records; when the compute target changed four times in one day, amended one record four times so voided analysis stayed auditable
- Designed a controlled A/B pilot (1,200 synthetic images, one variable) whose result, +0.12 macro-F1 and worst-case saturated $\rightarrow$ dry errors cut from 21 to 0, was adopted into the training config as a documented decision

PROJECTS

Audio Rate – Passive Acoustic Exertion Estimation | SE 498 Team Lead

Sep. – Dec. 2026

- Lead a 3-person team building a smartphone system that estimates exercise exertion from breathing audio, with no wearable on the user; own model architecture, signal-processing design, and deliverable coordination
- Positioned novelty via an AI-assisted PRISMA-style review of 100+ records: consumer mics, a continuous participant-normalized target, and cross-person and cross-device generalization
- Built the iOS capture app (48 kHz audio, motion logging, BLE heart-rate strap client); defined the human-subjects data plan: informed consent, de-identified IDs, raw audio off-repo, on-device inference

CATrack Inspect AI – HackIllinois Caterpillar Challenge | Python, FastAPI, Modal

Feb. 2026

- Built an inspection tool grading Cat D6N dozer anomalies from voice notes and photos (Whisper + Claude Vision); ran sprints with acceptance criteria and designed JSON contracts for two cross-team services

INVOLVEMENT

Treasurer, Philippine Student Association | Lead financial advisor for 200+ members

May 2026 – Present

- Manage financial operations for the Midwest's largest student-led Filipinx-American conference

ADDITIONAL INFORMATION

Product: market research, competitive analysis, segmentation, go-to-market, cost modeling, make-vs-buy, risk registers

Technical: Python, SQL, C++, Swift, PyTorch, FastAPI, Git, Fusion 360 API, Obsidian, Notion API, Claude Code

Languages: English (fluent), Japanese (intermediate)

Interests: Sports psychology, philosophy, classical literature, modern art, techno music