

Zane Luis

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EDUCATION

University of Michigan, Ann Arbor

August 2025 - May 2029

Incoming Sophomore, Bachelor of Science, **Computer Science**

Pennsylvania State University (PSU), College of Engineering

Transferred

Bachelor of Science, **Computer Science**

- *Relevant Coursework:* Programming and Computation I (Fundamentals), Object-Oriented Programming and Data Structures and Algorithms, Discrete Math, Calculus I, Calculus II, Physics (Mechanics)
- *Honors:* **Dean's List**

GEMS Modern Academy (GMA)

Graduation: May 2025

Dubai, United Arab Emirates

ISC Grade 12 Aggregate : 90%

ICSE Grade 10 Aggregate : 92%

- *Relevant Coursework:* Physics, Mathematics, Chemistry, Computer Science

TECHNICAL SKILLS

Languages : Python, Java

Libraries & Frameworks: Flask, NumPy, Keras, Streamlit

Developer Tools : Git, Google Looker Studio, Claude Code

In Progress : PyTorch/TensorFlow, Neural Network Training, LLMs, Retrieval-Augmented Generation (RAG), Model Fine-Tuning

WORK EXPERIENCE

Samsonite

August 2024

Data Analytics Intern

- Analyzed **sales performance data** to evaluate growth opportunities for the *American Tourister Airconic* product line
- Assessed **target markets, pricing ranges, and consumer segments** to inform future product development strategies
- Built visual reports and dashboards using **Google Looker Studio** to communicate findings to stakeholders

Cult.fit

July 2023

Product Development Intern

- Designed and developed a **fitness mobile app concept** aimed at making health and wellness more accessible
- Conducted **market research** to identify user pain points and define a clear **problem statement**
- Translated insights into a **minimum viable product (MVP)** with a user-centric design approach

PERSONAL PROJECTS

Lovemaxxing - AI-Powered Dating Platform

Live Site - <https://lovemaxxing.vercel.app/>

GitHub Repository - <https://github.com/zane180/lovemaxxing>

Next.js 14 · TypeScript · Python · FastAPI · PostgreSQL · WebSockets · Claude Vision API

- Engineered a multimodal AI pipeline using Claude Vision API to extract facial features from user photos, constraining LLM output to a 40-label controlled vocabulary via structured prompting and server-side validation — ensuring zero label drift between model output and user preference inputs
- Designed a four-signal compatibility scoring engine combining Jaccard similarity on interest tags (40%) and personality alignment (20%) with AI-detected facial feature matching against stated preferences (30%) and a mutual attraction bonus (10%), producing a normalized 0–100 score with O(n) candidate ranking per request
- Architected a production FastAPI backend with 6 domain-separated routers, SQLAlchemy ORM, JWT/bcrypt auth, email verification, bidirectional block filtering in SQL, and rate limiting at 200 req/min globally with stricter per-route limits on auth endpoints
- Implemented real-time WebSocket chat scoped to matched user pairs, a gesture-driven swipe UI with Framer Motion physics that pauses rAF loops on page visibility loss to reduce mobile battery drain, and PWA installability for iOS and Android

NBA Prediction Bot (In Progress)

Python · ESPN API · Kalshi API · PyTorch

- Building a real-time NBA outcome prediction model that ingests live game data via ESPN public APIs and executes automated positions on Kalshi prediction markets

Sentify - AI Art Model - via Streamlit - Ongoing - AI (LLM) Powered Website

Project Description & Source Code: <https://docs.google.com/document/d/1UxCdijFvtJDwKuuq77eZGvjK8wt9QtexBMP0JSlydG1g/edit?usp=sharing>

- Built an AI-driven web application that analyzes emotional themes in user-input songs or movies and recommends emotionally similar content
Implemented LLM-based emotion detection and recommendation generation using Google Gemini API
- Developed the application using Python and Streamlit, handling user input, model interaction, and output rendering
- Applied prompt engineering to extract dominant emotions and generate context-aware recommendations with explanations
- Designed a modular architecture to support future API integrations (e.g., Spotify, IMDb, OpenAI) and user personalization

LEADERSHIP EXPERIENCE & ACTIVITIES

Head of Web Development @Debuggers Club

Core Member, Debuggers Club

March 2022 - June 2023

- Led the creation of a **centralized database system** to digitize and manage the school **House Points System**
- Designed and implemented a system to **track availability, usage, and location of school-owned devices**
- Collaborated with team members to ensure **data accuracy, efficiency, and system reliability**
- Built and maintained **full-stack web applications**, gaining hands-on experience in database management and software development
- Worked with **HTML, CSS, React** (frontend) and **PHP, MySQL, Apache** (backend)

Machine Learning @ Penn State (ML@PSU) -Member

August 2025 - present

- Active member of Penn State's Machine Learning student club, participating in workshops and peer discussions focused on Python-based ML fundamentals and applied problem-solving.
- At the Cursor & MCP Showcase, worked in a small team to build a Python-based text sentiment classifier, using basic preprocessing and a lightweight ML model using **Keras** to label user-input text as positive, negative, or neutral.
- Focused on clean logic, modular code structure, debugging, and rapid iteration, gaining hands-on experience turning a simple idea into a working prototype while learning how AI-assisted developer tools support development workflows.

Remote Java Coding Instructor

April 2024 - September 2024

Kyangala Girls High School in Kenya

- Taught **Java programming remotely** to underprivileged high school students as part of a Duke of Edinburgh Award volunteering project
- Designed and delivered lessons covering **programming fundamentals, logic, and problem-solving**
- Adapted teaching methods to a **remote, cross-cultural learning environment**, bridging geographic and cultural gaps
- Helped students build **confidence in writing their own Java programs** and develop foundational coding skills
- Strengthened **communication, instructional, and mentorship skills** through sustained remote teaching
- Fostered interest in **technology and STEM pathways**, with several students expressing interest in further studies

Certificate :

https://drive.google.com/file/d/1kOX3fmYCFsyCWHNwp9Es_saWPghwzTbm/view?usp=sharing

Captain;Varsity Basketball team at GMA

March 2021-June 2023

- Participated in inter-school and inter-house competitions, as a member of the school team.
- Consistently played point guard and shooting guard, and served as Captain of the school team.
- As captain, I handled the formation of the team and designated the position of each player based on strengths and weaknesses.
- Responsible for making strategy calls on the court. Tested and improved my skills during high-stakes games against other schools in the UAE.

HONORS AND AWARDS

Silver International Award *June 2025*
Duke of Edinburgh, United Kingdom

School Runner Up - Computer Science - 98/100 *May 2025*
GEMS Modern Academy (GMA) , United Arab Emirates

Math Olympiad(GIMO) *January 2024*
International Rank - 739