

Aspiring researcher in machine learning and robotics, with hands-on experience in embedded systems, AI prototyping, and open-source development. Driven by curiosity for how intelligent systems can bridge hardware and software.

## Projects

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- **Lucy AI Motivator — Personal AI Assistant (in progress)**  
Designed an AI accountability companion that performs daily check-ins via phone and voice. Implemented SFT for personality modeling, RAG for memory, and backend in Python. Integrated speech-to-text and text-to-speech pipelines for natural daily interaction.
- **Solar Car Challenge — Texas Motor Speedway (2024)**  
Led development of telemetry and battery management system for a self-built solar car. Collaborated on data logging, CAN integration, and hardware prototyping. Represented team at the *Texas Motor Speedway* competing against U.S. high schools.
- **SaaS Insight Engine — B2B Market Research Platform**  
Built during a one-week sprint with peers from NYU. Aggregates profitable SaaS ideas by scraping Reddit, analyzing pain points, and ranking opportunities using the Google Keywords API. Deployed full-stack prototype on a free-tier backend. ([saas-engine.com](https://saas-engine.com))
- **Robotic Arm (3D Printed)**  
Built and programmed a 6-DoF closed-loop robotic arm using ROS2, Computer Vision, and Python-based kinematics. Served as an early foundation for later robotics experiments.
- **Fully Autonomous Agentic Web (hosted locally)**  
Distributed multi-agent AI on Raspberry Pi; DeepSeek-R1 agents with local CUDA model-splitting across dual GPUs, tuned (temp/top-p/top-k/...) for coordinated reasoning. Created a cli displaying live monitoring feeds of command executions and actions.

## Technologies and Languages

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- Languages: Python, JavaScript (React), HTML, CSS
- Technologies: PyTorch, Docker, Git, ROS2, Matplotlib, Fusion 360
- Other: Data structures and algorithms, CAD, PCB and circuit design

## Experience

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**Kent AI Lab (K.A.I.L.) Leader**

**Kent School**  
USA, CT

**2023-2024**

- Organized workshops and interactive AI sessions for 50+ members.
- Presented at inter-school events and expert discussions on applied AI topics.

## Independent Projects / Open Source

- Active contributor to open-source AI/robotics repos (PyTorch, Dummy-Robot).
- Explored computer vision, ROS modules, and WiFi pentesting with Pwnagotchi.

Education and Certifications

- **Cambridge International A-Levels** — *Computer Science, Physics, Maths, Further Maths* **2025–2026**
- **Kent School** — *Sophomore Year Abroad (CT, USA), Honor Student* **2023–2024**  
*Focused on Digital Electronics and Aerospace Engineering*
- **Gymnasium Eppendorf** — Hamburg, Germany **2018 – 2023**

Interests

Robotics • Machine Learning • Autonomous Systems • Human–AI Collaboration • Prototyping of Gadgets