Solan Homestead

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Experience

Matia Miami, FL
Software Engineering Intern, DataOps Platform *June 2026 – August 2026*

- Built and shipped five production data connectors, including OpenAI, Forethought, Coupa, Great Question, and Granola, from API research and schema modeling through testing and production rollout.
- Delivered 45 connector tables, 48 data streams, and 54 typed schemas supporting production data workflows.
- Modernized connector infrastructure in TypeScript with reusable stream abstractions, pagination-safe requests, rate limiting, connection testing, archived-state filtering, and improved error handling.
- Implemented production product analytics in PostHog, defining 45 typed integration and catalog events across connector setup, connection success/failure, search, schema views, tags, drafts, and asset lifecycle workflows.
- Assisted engineers during on-call rotations by investigating production connector incidents and fixing recurring failure modes through improved diagnostics, retry behavior, and targeted test coverage.

Laboratory for Intelligent Perceptual Systems (LIPS) Worcester, MA
Undergraduate Researcher, Clark University *June 2025 – Present*

- Migrated a distributed ROS1 perception and control pipeline to ROS2 on Raspberry Pi 5, redesigning multi-node communication with DDS for reliable cross-device messaging.
- Refined a real-time YOLOv11 vision pipeline and built a labeled dataset of 300+ images to improve detection reliability during live robot testing.
- Integrated and debugged RealSense D435, LiDAR, and motor drivers to restore consistent data flow across the embedded robotics stack.

Lux Lab, Clark University Worcester, MA
Makerspace Student Leader *January 2025 – Present*

- Maintained and troubleshot makerspace equipment, trained 100+ students on safe tool use, and supported student builds through hardware debugging, fabrication guidance, and rapid prototyping.

Education

Clark University | Worcester, MA Expected May 2027
B.A. in Computer Science, Minor in Data Science; GPA: 3.82
Coursework: Data Structures & Algorithms, Artificial Intelligence, Applied Machine Learning

Projects

ClarkCalendar.com | *React, JavaScript, Selenium, Web Scraping*

- Built a course-planning application used by 100+ students, transforming 900+ scraped and normalized class records into real-time filtering and schedule visualization.

SmartSort | *Python, YOLOv11, Computer Vision, Embedded Systems* | *$5,000 Grant Recipient*

- Awarded a $5,000 Clark AI Innovation Fund grant with a teammate to build AI-enabled waste-sorting stations.
- Developing a real-time vision pipeline and hardware control system that routes items among trash, recycling, and compost compartments.

ResQMe | *ESP32, C++, Mesh Networking, Embedded Systems* | *2nd Place, HackHarvard 2025*

- Built an offline disaster-response mesh with SOS alerts, targeted messaging, GPS, OLED UI, and a master node for field-data aggregation without Wi-Fi or cellular service.

Self-Hosted Infrastructure & Homelab | *TrueNAS SCALE, Linux, Docker, Tailscale, NFS, Networking*

- Built and maintain a self-hosted lab across TrueNAS SCALE and Linux, deploying containerized services, databases, NFS-backed storage, and private Tailscale networking.
- Built and networked a four-node Debian cluster and deployed self-hosted GitHub Actions runners for CI/CD and containerized workloads.

Skills

Languages: TypeScript, JavaScript, Python, C++, Java, SQL, Bash
Web & Data: React, Zustand, Node.js, Express, REST APIs, ETL, Data Pipelines, PostgreSQL, MongoDB, Snowflake
Systems & ML: Linux, ROS2, DDS, Docker, MQTT, OpenCV, PyTorch, YOLOv11
Tools: Git, GitHub, GitHub Actions, CI/CD, Datadog, Postman, Nx, Selenium, PlatformIO