Dylan Vidal

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EDUCATION

University of Central Florida, Burnett Honors College

Orlando, FL

Bachelor of Science in Computer Science; Minor in Robotics and Data Science

Aug 2023 - May 2027

EXPERIENCE

Knight Hacks

President

Feb 2024 - Present

Orlando, FL

- Managed a non-profit organization with 500+ members and \$40,000 dollars in yearly revenue focused on creating confident, capable, and passionate developers.
- Organized the Knight Hacks VII Hackathon for over 1500+ registrants and 547 attendees, with a total of 94 projects submitted.
- Led a team of 45 students to achieve deliverables such as 60 technical workshops a year and 100+ member mentorship.
- Revamped the mentorship program, expanding the number of participants by 58% compared to previous school year.
- Personally secured nearly \$25,000 for the organization by networking with numerous Fortune 500 companies over 2 years.

Software Engineer Intern

May 2025 - Present

Santa Clara, CA

- NVIDIA
- $\bullet \ \ Contributed \ to \ the \ autonomous \ hardware \ recovery \ team \ for \ \underline{NVIDIA \ Mission \ Control}, \ the \ software \ layer \ for \ AI \ factories.$
- Overhauled Kubernetes / Helm infrastructure to achieve zero-downtime rolling upgrades, fully eliminating 10 hours of scheduled maintenance per year per customer and accelerating development environment build times by 93%.
- Implemented industry standard horizontal scaling techniques to core services increasing traffic bandwidth by upwards of 85%.
- Optimized network flow by modifying NGINX ingress patterns and service-to-service communication, reducing latency by 45%.
- Developed a log analysis tool that automatically identifies and filters noisy logs, reducing time-to-debug of core services by 60%.
- Leveraged fine-tuned Llama models to generate semantic embeddings for clustering and identifying noisy log patterns.

Software Engineer Intern

Dec 2024 - Apr 2025

<u>Pheratech Systems</u> Orlando, FL

- Researched Embodied General Intelligence and Sociobehavioral Robots for crisis and natural disaster search and rescue.
- $\bullet \ \ {\rm Developed} \ \ {\rm an \ internal \ inventory \ management \ system}, \ {\rm reducing \ unnecessary \ was teful \ restock \ purchases \ by \ \bf 40\%.$
- Trained custom YOLOv8 object detection models with a resulting 97% accuracy in recognizing target objects.
- Aided in securing pre-seed funding by contributing to multiple high-impact technical projects across the company.

PROJECTS

<u>Visuworld AI</u> | React, Next.js, Tailwind, FastAPI, MongoDB, GLSL, Three.js, Google Gemini

Apr 2024 - Present

- 1st place winner out of 97 projects for the Best Use of Google Gemini Award at Bitcamp 2025.
- Invented a novel pipeline for 3D scene generation by prompting Google Gemini to produce OpenGL GLSL code.
- Parsed and rendered GLSL shader code in a **React** interface using **Three.js** and **WebGL** to display generated 3D environments.
- Built a public-facing gallery of generated environments by storing code snippets in MongoDB.

<u>Voiceboard AI</u> | React, Next, tRPC, TypeScript, Google Gemini, Speech Detection, Mermaid

Sep 2024

- 1st place winner out of 146 projects for Google's Hack for Social Good Challenge at Shell Hacks 2024.
- Advocated for engineers with physical disabilities by creating voice-to-diagram technology to make technical communication more
 accessible.
- Utilized the native Chromium Web Speech Recognition API, boosting performance by 70% over server-side alternatives.
- Leveraged the Google Gemini API to transform plain text into renderable Mermaid syntax for diagrams.

<u>Lootcode</u> | React, Next, Tailwind, SQL, tRPC, TypeScript, Zx, Docker, Linux

Feb 2024 - May 2024

- 1st place winner of the Knight Hacks Spring 2024 Projects Program.
- Featured on Linux Magazine for Free Open Source Software after reaching 50,000 page visits and 500 monthly active users.
- Engineered a secure code-grading server and IDE using isolated **Docker** containers to mitigate security vulnerabilities.
- Self-hosted the full-stack application on a Linux VPS with a custom CI/CD pipeline for reliable deployment and uptime.

TECHNICAL SKILLS

Programming Languages: Python, C#, C++, C, Java, HTML, CSS, JavaScript, TypeScript, SQL

Libraries/Frameworks: React, Next, Tailwind, tRPC, Prisma, Drizzle, NextAuth, Kubernetes, Helm, pandas, numpy, PyTorch, scikit-learn, Qt, LangChain, Gemini, ADK, Pyside6, Selenium, Nextcord, Tkinter, Pygame

Tools/Platforms: Windows, Linux, MacOS, Docker, Coolify, Vercel, Node, Bun, pnpm, Jupyter Notebooks, GitHub, Raspberry Pi