

# Daniel Vayman

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## EDUCATION

### The University of Texas at Dallas

Expected Graduation Date: Spring 2025

B.S., Computer Science

GPA: 3.62

- **Notable Coursework:** Advanced Algorithm Design & Analysis, Programming Language Paradigms, Computer Networks, Database Systems, Operating Systems, Software Engineering, Data Structures and Algorithms, Digital Logic & Comp. Design

## SKILLS

- **Programming:** C, C++, C#, Java, Python, HTML, CSS, JS, Bash/Shell, XML, MIPS
- **Frameworks:** TensorFlow, PyTorch, ROS, Docker, CMake, Bazel, PyTest
- **Networking/Hardware:** CAN, Ethernet, TCP/IP, UDP, LACP, GPS, LiDAR, IMU, IoT, REST API
- **Software:** Linux, MacOS, Windows, Git, VSCode, Microsoft Applications, Atlassian, Arduino

## PROFESSIONAL EXPERIENCE

### SpaceX

Hawthorne, CA

Software Engineering Intern

May 2024 - Aug. 2024

- Implemented **guidance, navigation, and control flight software**, working with **state machine logic** in **C++ and Python**.
- Drove **cross-functional efforts with hardware teams** to **cut several hours from vehicle operations**, ensuring software solutions were tailored for efficiency and reliability.
- Observed the **highest industry standards** of software design, testing, review, and verification practices.
- Debugged fluid models in **internal simulation software**, and improved **application software** tools with **API and DB queries**.

### Cisco

Research Triangle Park, NC

Software Engineering Intern

May 2023 - Aug. 2023

- Implemented hardware counter configuration on Cisco Firepower devices **using C, C++, XML, & IPC**, **significantly reducing debugging time** and introducing interface insights for enhanced network monitoring and security measures.
- Spearheaded the enhancement of Cisco ASA CLI by enabling port-channel/LACP management commands **using C**, **expanding and improving network monitoring and troubleshooting capabilities**.

## TECHNICAL EXPERIENCE

### Nova <https://nova-utd.github.io/>

The University of Texas at Dallas, Richardson, TX

Project Lead

Sep. 2022 - Current

- **Lead UT Dallas's autonomous driving research program** to achieve **Level 4 full autonomous driving**, managing teams of **12** software developers and **7** hardware technicians, outlining goals, delegating tasks, and fostering individual growth.
- **Oversee all aspects of our software, embedded, and hardware systems**, from development to integration to deployment, while ensuring efficiency and adherence to safety measures and proper **agile development** methodology.
- Collaborate with team members to design and integrate critical algorithmic/engineering solutions, provide technical direction, review code, and deliver constructive feedback.

### FIRST Robotics

Marquette High School, Chesterfield, MO

Co-Captain, Programming Lead, Design Lead

Aug. 2019 - May. 2022

- Single-handedly oversaw the development and testing of **computer vision** and **state estimation** algorithms in **Java** using **Tensorflow/Vuforia**, responsible for successful **embedded software deployment** and **sensor calibration**.
- Recruited, mentored, and managed a team of **20 students**, delegating responsibilities and fostering collaboration.

## PROJECT EXPERIENCE

### Navigator <https://nova-utd.github.io/navigator/>

Sep. 2022 - Current

- Lead and contribute to the development of the **first open-source, modular, extensive framework** for autonomous driving research, working with **machine learning, computer vision, embedded systems, sensors, networking, and mapping**.
- Use **ROS, Tensorflow, and PyTorch** to implement industry-leading **GNC algorithms** in **C++ & Python** from scratch.

## ADDITIONAL INFORMATION:

Languages: English, Russian (Intermediate)

Eligibility: US Citizen, Eligible to work in the US for internships and full-time with no restrictions