

Daniel J. Hagenlocker

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EDUCATION

Stanford University

Palo Alto, CA

B.S. Degree in Electrical Engineering / Computer Science

June 2028

- Relevant Courses (planned for 24-25): Programming Abstractions, Computer Organization and Systems, Differential Equations, Multivariable Calculus w/ Linear Algebra, Probabilistic Systems Analysis
- Anticipated Activities: Stanford Tree Hacks, Stanford AI Club, BASES Startup Challenge, Open-Source Silicon

Gulliver Preparatory

Miami, FL

Merit Scholarship Recipient

May 2024

- GPA 5.96/6.0 | SAT Math: 800 | SAT R&W: 770
- Honors: Cum Laude (top 5% of class), Computer Science Honor Society President, AP Scholar w/ Distinction, Silver Knight Nominee (Science), MIT Book Award, College Board National Hispanic Recognition

EXPERIENCE

NASA Internship

Austin, TX

Researcher

Jun 2022 – Aug 2022

- Programmed Python scripts to automate the scraping, parsing, and processing of 5 TBs of geospatial data from ICESat-2 and LandSat-8 satellites, reducing manual data collection time by 90%
- Designed ML models with the long short-term memory RNN architecture in TensorFlow predicting water loss over time in critical California reservoirs, enhanced predictive accuracy by 75% compared to alternative methods
- Presented research at American Geophysical Union Fall Meeting 2022 and NASA scientists contributing to ongoing research on water conservation and management in drought-prone regions

MITES Semester

Boston, MA

Researcher/Participant

June 2023 – Dec. 2023

- Led research project on convolutional neural networks for image classification written in Julia using the Flux library
- Published science writing article on the global impact of NASA's previous and ongoing remote sensing missions
- Presented research findings and case studies for MIT faculty panel at the MITES symposium

FIRST Robotics

Miami, FL

Team President (5557)

Jan. 2022 – May 2024

- Led Java software development team of 10 students implementing computer vision-based real-time localization, sensor fusion via Kalman filters, dynamic path finding and following, and holonomic drivetrain optimization
- Oversaw mechanical and electrical design teams of 30 students, reducing critical systems failures by 93% YoY

PROJECTS

Inside the Box (Patented Sustainable Packaging Startup)

Co-Founder

Dec 2020 – Aug 2021

- Utility Patented packaging alternative for consumer electronics sourced entirely from the agricultural waste stream
- Performed materials research, simulations, and analysis in Fusion 360 to determine optimal material composition and the box's structural design (corn starch foam and wheat straw paper)
- Awards/Recognition: Utility Patent (US 20220324625), Dell Technologies Conrad Challenge - Winner, Blue Ocean Entrepreneurship Competition - 2nd Place

RecycleRight / HomeGrown (iOS Apps)

Co-Founder

Jan 2022 – May 2024

- Developed iOS apps for biogas digestion monitoring and waste contamination prevention by leveraging a custom image classification model to identify recyclable materials and interactive Augmented Reality experiences
- Reduced waste contamination rates in participating communities by 80% in pilot testing programs
- ML model achieved 98% accuracy and 95% precision in identifying recyclables vs. non-recyclables
- Internationally recognized at entrepreneurship competitions for climate impact (Paradigm Challenge & Conrad Challenge)

SKILLS

Programming Languages: Java, Python, TypeScript, HTML, CSS, Julia, SQL, Arduino, C, C++, Assembly

Technologies: TensorFlow, ReactJS, Tailwind CSS, Flux, Github, Netlify, Firebase, Figma, Vite, Onshape, Fusion 360

Interests: Frontend Web Dev, Robotics, Computer Vision, Machine Learning, Environment, Data Science