

Derek Goss

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derekgoss.com

(919) 923-0553

EDUCATION

Cornell University, College of Engineering • Ithaca, NY

Aug 2018 – May 2022 expected

Bachelor of Science, Engineering Physics — 3.5 GPA

Harriton High School • Rosemont, PA

June 2018

International Baccalaureate Diploma — 4.98/5 GPA

EXPERIENCE

Cornell Racing, Formula SAE Project Team

Ithaca, NY

Electric Powertrain Lead

Oct 2018 – present

Cornell FSAE designs, manufactures, and races an electric formula-style race car for official FSAE competitions.

Currently leading development for our third-generation high performance electric powertrain for the 2021–22 season.

- Redesigned our second-generation battery modules and pack enclosures to implement a modular component architecture, simplify manufacturing and maintenance processes, and improve safety for high voltage areas
- This second-generation architecture passed rigorous competition inspection for the first time in our electric history
- Currently leading HV and LV teams to reduce part count and manufacturing time, route wire harnesses in CAD, improve battery cooling, streamline battery mounting processes, and optimize for space-efficient packaging

SpaceX

Brownsville, TX

Starship Avionics Build Intern

June – Aug 2021

Accelerated harness manufacturing and owned avionics build for a critical-path project on the first orbital-class Starship.

- Represented avionics build team on a critical-path project, coordinating with multiple teams to navigate uncharted problems in thermal protection, supply chain, harness assembly, and vehicle integration
- Designed new tooling and tested new automation equipment for avionics technicians to support both existing builds and a next-gen harness assembly line
- Created integration planning on tight timelines for vehicle harness installations
- Worked with technicians and engineers on improving build processes and troubleshooting manufacturing issues

Virginia Tech Assistive Robotics Lab

Blacksburg, VA

Mechanical Engineering Intern, Exoskeleton Design

June – Aug 2019

Developed next-generation passive exoskeletons for industrial and consumer lifting applications.

- Prototyped low-budget mechanical systems to detect bending motions from specific movements in the torso and legs
- Bend-tested samples of industrial fiberglass and carbon fiber strips to experimentally calculate energy return
- Sewed lightweight and breathable textile harnesses for the hips and legs

Synchro — synchrostopwatch.com

Haverford, PA

Creator and Developer, iOS App

Aug 2017 – June 2018

Built an innovative stopwatch & logging app for athletes and coaches, used in over 10 countries and featured on the popular running blog LetsRun.com.

- Quickly share detailed stopwatch data with others by sending them an encoded link
- Integrates live weather, tracking splits for multiple athletes simultaneously, and searchable logs
- Haptic feedback and volume button controls keeps eyes on the event instead of the screen

LEADERSHIP & INVOLVEMENT

• Cornell Applied & Engineering Physics Society, Secretary (2020)

2020 – present

• Cornell Pi Kappa Alpha Fraternity, Member at Large (2020)

2019 – present

• Cornell Triathlon Club

2018 – present

• Harriton HS Cross Country and Track Teams — Varsity Team Captain, 4-year letterman

2014 – 2018

Skills: product design, rapid prototyping, project management, design thinking, CAD, programming, electromechanics

Passions: building technology for humans, transportation design, converting ideas into manufactured products

Hobbies: cooking and molecular gastronomy, rap music culture, endurance sports, travel photography, podcasts