

Daria Kot

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Education

Cornell University, College of Engineering

Masters of Engineering in Mechanical Engineering

Bachelor of Science in Computer Science, Minor in Robotics

Ithaca, NY

August 2025 - May 2026

August 2021 - May 2025

Current Courses: *Design and Control of Haptic Systems, Intermediate Dynamics, Feedback Control, Statics, Computer Aided Design, Design Failure Mode Analysis.*

Completed Coursework: *Algorithms, Operating Systems, Computer System Organization, Artificial Intelligence, Practicum in AI, Machine Learning, Data Structures & Functional Programming, Object Oriented Prog & Data Struc, Statistics, Multivariable Calculus, Foundations Robotics, Fast Robots, Mechatronics, Data Science, Integrated Sensors and Actuators, Designing with Microcontrollers, Spacecraft Technology & Systems*

Northern Virginia Community College 2021'

Associates of Science in Information Technology, Summa Cum Laude

Career Studies Certificate: Database Specialist

Manassas, VA

August 2019 - June 2021

Battlefield High School 2021'

Center for Applied Science, Interactive and Information Technology

Haymarket, VA

August 2017 - June 2021

Technical Skills

- **Programming Languages:** C++, Python, MATLAB, Java, OCaml, & HTML/CSS, Java SWING
- **Developer Tools:** Git, GitHub, VSCode, SolidWorks, Fusion 360, Arduino IDE
- **Machining & Fabrication:** CAD, 3D Printing, Laser Cutting, Lathe, and Mill
- **Technical Soft Skills:** Leadership, System Requirements, System Verification and Testing, Multidisciplinary Integration (Mechanical, Electrical, Software)

Work Experience

Telos Health

Systems Engineering Intern

Campbell, CA

June 2025 – August 2025

- Designed and manufactured a latency characterization device for robotic system, reducing measurement uncertainty and improving reliability of results.
- Streamlined testing workflow: replacing manual video frame analysis to automated measurements (20+ measurements in minutes, latency identified in seconds, and improved accuracy).
- Programming microcontroller for real-time data acquisition and processing.
- Circuit design, fabrication, and system integration.
- Testing, verification, and iterative validation of hardware and software.

Cornell Rocketry - Student Engineering Project Team

Recovery and Payload Sub-team Lead

Ithaca, NY

June 2024 – June 2025

- Lead an 8-member multidisciplinary sub-team, established system requirements and project development and testing timelines for BLiMs (Brake Line Manipulation System), dual-stage parachute deployment system, and air-sampling payload consisting of a venturi scrubber, coulter counting analysis system, sealing mechanisms, electronics and software.
- Led testing campaign for the Recovery Systems, managing integration of L3 rocket, BLiMs, dual-stage parachute deployment system, and avionics bay; launched the vehicle 4 times, significantly increasing the team's launch cadence, accelerating development cycles, and validating recovery performance.
- Managed integration and flight testing that resulted in the first successful flight and deployment of BLiMs in the project's 7+ year development history.
- Collaborating with 50 team members to design, manufacture, and test a SRAD Hybrid Rocket with an autonomous recovery system earning 3rd at '24-'25 Spaceport America Cup.
- Overseeing recruitment and onboarding of new members through information sessions, applications, interviews, trainings, to sustain sub-team growth and knowledge continuity.

Student Engineering Project Team Member

October 2022 – May 2024

- Developed an electronic suite (GPS, barometric altimeter, compass, IMU, SD card, motor drivers, stepper motors, microcontroller) to collect telemetry and control BLiMs.
- Programmed closed-loop PID control software in C++ to process sensor data and actuate stepper motors that pull parachute brake lines to guide the rocket's descent toward a designated cardinal direction.
- Designed, manufactured, programmed, and tested peripheral electronic systems needed for testing BLiMs:

- Radio linked remote actuator using dual microcontrollers for midair rocket separation, enabling parachute inflation testing.
- Sensor board consisted of altimeter, compass, IMU, GPS, SD Card reader and microcontroller, used to log telemetry during parachute drop tests.
- Integrated electronics and PID controller for a camera stabilization Payload that kept camera orientation stationary against the roll of the rocket during flight.
- Placed 2nd out of 160 teams at the '22-'23 Spaceport America Competition, and 1st out of 10 teams in 10k Student Research and Development Category.

Fast Robots Teaching Staff

Ithaca, NY

Undergraduate TA

December 2024 –Present

- Provided hands-on assistance in debugging software and hardware issues, offering personalized guidance to help students troubleshoot and refine their lab projects.
- Developed and documented a step-by-step guide for students to set up and manage their own websites, enabling them to effectively showcase their projects and skills online.

FIND Research Group - ECE Department Cornell

Ithaca, NY

Undergraduate Researcher

June 2024 – December 2024

- Assisting Professor to develop a digital communications tool that simulates data transmission over Wi-Fi.
- Engineering electronics that interface with a server, sample, distort, and transmit .wav files.
- Programming and testing software to ensure seamless integration with electronic components.

Progeny Systems Corporation

Manassas, VA

Software Developer Intern

May 2022 - July 2022

- Developed GUI testing tool which simulated power control panel of Common Weapon Launcher on submarines.
- Utilized Java Swing and Linux to build GUI and setup client server connections.
- Collaborated with 10 engineers to determine the requirements of testing tool.

Skills and Interests

Fluent in Russian, Painting, Printmaking, Drawing, Woodworking/Whittling, Rock Climbing, Boxing