James Jagielski

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EDUCATION

Olin College of Engineering   **Needham, MA**
- Candidate for a Bachelor of Science degree in Electrical and Computer Engineering   May 2025| GPA: 3.92/4.0
- Recipient of 50% Olin Tuition Scholarship

Southwest High School   **Minneapolis, MN**
- IB Diploma, Varsity team captain of swimming, sailing and table tennis   June 2021 | GPA: 3.95/4.0

EXPERIENCE

Graco Inc.   **Minneapolis, MN**
  Electrical Engineering Internship   Summer 2022
  - Reviewed, tested and debugged malfunctioning PCBs
  - Wrote firmware to convert encoder ABZ signals into hall sensor UVW signals
  - Designed and wired testing panels for the life span of pumps

Olin College of Engineering   **Needham, MA**
  Projects and Research   Fall 2022
  Olin Electric Motorsports *Testing Sub Team | BMS Peripheral Testing Rig*
  - Designed a PCB to source and measure signals from a BMS to ensure proper detection of temperature errors and voltage differences, and wrote the associated software

  Source Measuring Unit   **Electronics**
  - Designed a PCB to sink and source voltage and current simultaneously through an integrated circuit chip
  - The PCB is capable of supplying and sinking voltages in the range –12V to 12V and a current of 150 mA
  - Wrote the associated PCB software with the RP2040 micro controller

  Ion Propulsion Research   **Student led Research**
  - Designed a circuit to suppress current transients in voltage drops during the ignition stage of the cathode
  - Aided in the mechanical design of hollow and heater-less cathodes

  Course Work
  Analog Synthesizer   **Principles of Engineering**
  - Designed and built a two-octave scale for a mechatronics project that interacts with a kinematic display
  - Designed the electrical system with a voltage-controlled oscillator and the power system for 12 servo motors
  - Collaborated with students in other disciplines to achieve an integrated project

  Analog Fourier Transform Circuit   **Quantitative Engineering Analysis**
  - Designed a circuit in simulation to compute Fourier Transforms of any analog signal

  Hydroponics
  Automation Sub Team | Sensor Rig   **Club**
  - Designed a PCB to send sensor measurements over WIFI
  - Designing a power system for the electric pumps for water, nutrients and solutions to handle various pH levels

  Bluetooth Speaker Design   **Independent Study and Research**
  - Designed and built a Bluetooth speaker circuit
  - Worked on CAD design and mechanical machinery

Minneapolis Sailing Center   **Minneapolis, MN**
  Sailing Instructor   Summers 2018-2019
  - Taught sailboat racing skills and techniques to youth and adult

Volunteer Activities
  YMCA Camp Widjiwagan   Summer 2021
  - Worked maintenance, cleaned and repaired gear, and planned wilderness trips at an outdoor activity camp
  YMCA Camp Du Nord   Summers 2019 and 2021
  - Participated in the leadership development program to learn leadership techniques and skills

SKILLS

- **Electrical Design and Prototyping:** LTSpice, KiCAD, Altium
- **Mechanical Design:** Solidworks, FUSION 360
- **Software:** Working proficiency of MATLAB, Arduino, Python and embedded C