Roby Kristopher Hooper

253-254-8889 | rohooper@g.hmc.edu | www.linkedin.com/in/RobyHooper

Education

Harvey Mudd College (Claremont, California) ***August 2024 - May 2028***

Bachelor's in Electrical Engineering | Humanities Focus in Economics | Dean's List | 3.65 GPA
NCAA Division III Soccer – 26 Games Played – Member of the Leadership Team
Relevant Coursework: Differential Equations, Systems Engineering (3 courses), Non-Linear Optimization, Linear Algebra, Experimental Engineering, Mechanics, Multivariable Calculus, Computer Science, Special Relativity, Materials Engineering, Economic Analysis, Digital and Electrical Engineering

Puyallup High School (Puyallup, Washington) ***August 2020 - May 2024***

Honor Society | 4.0 Unweighted GPA | #1 Class Rank | 99th Percentile SAT | Varsity Soccer Captain

Work Experience

Prime Trading ***Chicago, IL***

Quantitative Trader/Researcher Intern ***June 2026 - July 2026***

- Developed a live BTC binary options trading algorithm on prediction markets, deriving Greek values and implied volatility from option prices and executing over 300 trades.
- Managed the market making desk's algorithm and hedge positions across the TBQ, TBX, and BX indices, placing trades in live ladders under time pressure.
- Built a factor-risk exposure model to calculate optimal hedge positions for a given portfolio, then worked with the head of quant to begin scaling the model from replicating existing methods into a tool used across ETF, basket-making, and market-making strategies.

Bethel School District ***Bethel, WA***

Technician Intern ***June 2025 - August 2025***

- Managed all iPads, MacBooks, TVs, and other devices for the Bethel School District, serving as technical support to 34 schools and 21,000 students.

Technical Skills

MATLAB, Python, C, Signal Processing, Systemverilog, Arduino/Embedded Systems, Operational Amplifier Circuit Design, Linear and Non-Linear Optimization, Java

Personal Projects

Zipline Optimization/Design with Constraints ***June 2026***

Applied Optimization Problem (MATLAB)

- Used equations from a zipline analysis paper to plot the shape of the zipline as well as the rider's path and velocity profile, in order to set up an optimization function in MATLAB.
- Optimized the design of a zipline to maximize the peak speed of a 70 kg rider while considering constraints on rope tension, vertical drop, and the experiences of riders of varying weights.

AUV Data Collection ***January 2026 - June 2026***

Experimental Engineering (Electrical and Software)

- Created an AUV with operational amplifier sensor circuits integrated with a protoboard and motherboard.
- Used proportional control with a pressure sensor for depth detection to autonomously travel to waypoints.
- Used MATLAB and C++ to control the AUV's Arduino and process all data collected upon deployment in three different locations.
- Served as project lead, managing deadlines and delegating tasks based on teammates' strengths.

Leadership Experience

National Outdoor Leadership School ***Vernal, UT***

Student ***August 2023***

- Completed a seventeen-day immersive wilderness expedition kayaking on Utah rivers; studied leadership and practiced applying skills in survival, team management, safety, kayaking, and communication.
- Strengthened leadership and community-building abilities while performing as one of the group's hardest workers, building self-confidence by excelling under demanding physical and mental conditions.