NICHOLAS J. HARDY

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EDUCATION

2020 - 2024 | BOSTON UNIVERSITY

Bachelor of Science (B.S.) in Computer Engineering

AUG - DEC 2022 | UNIVERSITY OF SYDNEY - STUDY ABROAD

Continuation of B.S. in Computer Engineering

SKILLS

- **Programming Languages:** C/C++, Matlab, Python, CSS, HTML, JavaScript, Verilog, MIPS Assembly
- **Technical Skills:** Git, SolidWorks, OnShape, Microcontrollers, NodeJS, React, Firebase, NextJS, TailwindCSS
- **Foreign Languages:** Spanish (fluent)

EXPERIENCE

- **MARKETS EQ,** SOFTWARE DEVELOPMENT/STRATEGY INTERN **Oct - Dec 2023**
  - Responsible for integrating Jest into the startup's codebase, significantly enhancing the React application's automated browser testing capabilities, which was key to improving both performance and development workflow.
  - Actively involved in shaping the go-to-market strategy by contributing to sales decks and product marketing, ensuring a cohesive approach between the technical development and commercial objectives.
- **PREDDIO TECHNOLOGIES,** IoT ENGINEERING INTERN **May - Jul 2023**
  - Played a pivotal role in the start-up's success by actively engaging in diverse areas including, product design and manufacturing, quality assurance, testing, coding, and debugging of proprietary IoT technologies
  - Collaborated directly with CTO and CEO throughout the design and testing cycle of a new IoT system, ensuring alignment with customer's constraints, subsequently writing a patent application
- **ROWY,** FRONT-END DEVELOPER/SOFTWARE SUPPORT INTERN **Aug - Nov 2022**
  - Contributed remotely to a variety of projects including A/B testing, documentation, and content creation for an innovative low-code data management Sydney-based start-up
  - Analyzed user sign-ups and identified potential customers that met specific criteria for targeted outreach, gathering useful feedback to drive product improvements

SELECT PROJECTS

- **SEMI-AUTONOMOUS WiFi BUGGY** **Apr 2023**
  - Worked closely with a team to design and execute a solution for a classroom rally course by integrating various distance sensors, cameras, and other optical and infrared sensors
  - Developed a user-friendly web interface enabling remote control of the buggy, along with a live video stream from the car and time splits from the course
  - Successfully implemented advanced features including QR code checkpoint decoding, PID-motor controlled constant speed, collision prevention, and real-time display of transit time on an alphanumeric display and MongoDB
- **ROOM OCCUPANCY MONITOR** **Mar 2023**
  - Collaborated with a team of top students to develop and calibrate an occupancy counting system utilizing thermistors, solar cells, ultrasonic sensors, and infrared rangefinders.
  - Engineered a real-time data processing system and an interactive Node.js and HTML interface for intuitive visualization and monitoring of occupancy data on a strip-chart display.
  - Integrated a responsive LED indication system for real-time occupancy detection, enhancing the solution’s responsiveness and user interface.
- **NFC E-SCOOTER KEY FOB** **Jan 2023**
  - Collaborated in designing and implementing a secure ESP-hosted NFC access control fob for e-scooters, utilizing IR LEDs/receivers and a Raspberry Pi for QR code decoding and authentication
  - Developed a secure architecture including encryption and database logging, ensuring the prevention of key cloning and unauthorized access.
  - Designed the fob to have RGB LEDs for immediate lock status feedback and established a web client interface that allows for easy database log viewing.

ACTIVITIES

- US Youth Sailing Team (2017-2019), BU Varsity Sailing (2020-2021), Sailing Instructor (2018-2022)