

John Austin Van Hooser

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Eagle Scout and current junior with a background in robotics, programming, and leadership. Completed space science and aerospace courses in addition to computer engineering track. Pursues an interest to work on autonomous operations for spacecrafts and space robotics.

EDUCATION

Junior at Florida Institute of Technology, Melbourne, Florida

May 2025

B.S. in Computer Engineering, GPA: 3.49

Relevant Courses

- Grad-level Mechatronics (currently)
- Intro to Machine Learning (currently)
- Digital Electronics (currently)
- Microcomputer Systems 2 (currently)
- Junior Design (currently)
- Multifarious Systems
- Electronics
- Aerospace Control Systems
- Soft/Hardware Design
- Computer Design
- Intro to Space Sciences

SKILLS

- Intermediate knowledge in C++, Python, MATLAB, SQL, HTML, JavaScript, PHP
- Robotics programming in C++
- Data structures and Algorithms in C++
- AVR and ARM programming
- Embedded systems in Arduino & Raspberry Pi
- CAD modeling and 3D printing
- Circuit Analysis
- Knowledge in Control Systems
- Knowledge in DSP speech and hardware

EXPERIENCE

Florida Institute of Technology, Melbourne, Florida

Mar 2023 - Present

Undergraduate Researcher

- Assisting PhD student with research on characterizing unknown non-cooperative spacecraft
- Developing superquadrics dataset to analyze familiarity with satellite components
- Developed algorithms to perform histogram analysis of variance in pixel data

Florida Institute of Technology, Melbourne, Florida

Aug 2021 - Present

Vex Robotics Lead Programmer

- Programming competition robots for driver and autonomous control using C++
- Using PID and odometry for better autonomous control

Calvert County Government, Prince Frederick, MD

Nov 2020 - Jul 2021 & Jun 2022 – Aug 2022

Geographic Information System Intern

- Updated County live map with parcel and easement replats
- Wrote an SOP of the process for future government use

Patuxent High School, Lusby, MD**Aug 2020 – May 2021***Lead and Lead Programmer for Engineering Design and Development Capstone Project*

- Lead team through engineering process to design an automated paper sorter
- Designed, tested, and developed barcode system using everyday writing utensils and an Arduino to catalog and be integrated into automated paper sorter

Patuxent High School, Lusby, MD**Aug 2018 – May 2021***Vex Robotics Build Team Member*

- Assisted with building mechanical systems for competition robots

Boy Scouts of America Troop 451, Lusby, MD**Mar 2014 – May 2021***Senior Patrol Leader, Patrol Leader, and Den Chief*

- Eagle scout project was building Mason Bee Hives for Sotterley plantation, Hollywood, MD

PROJECTS

Florida Institute of Technology, Melbourne, Florida*Project 1 of MEE 5316 Mechatronics***Jan 2024 – Present**

- Developed a stopwatch using 4-digit 7-segment display, Arduino AVR, timers, and interrupts

*Final Project of ECE 3551 Multifarious Systems***Aug 2023 – Dec 2023**

- Developed Frontend and Backend of website to track fantasy character stats using HTML, CSS, JavaScript, PHP, and SQL on Apache server database

*Final Project of ECE 3551 Microcomputer Systems 1***Aug 2023 – Dec 2023**

- Developed WAV File reader and writer to graph and apply effects to WAV files on Raspberry Pi

*Final Project of ECE 1551 Computer Design***Jan 2022 – May 2022**

- Developed Simon Says on Arduino Uno using knowledge of state machines and AVR programming

HONORS AND AWARDS

- Vex U Robotics team competed in 2023 Vex World Championship (Spring 2023)
- Dean's List (Fall 2021- Fall 2022)
- Earned Eagle Scout (2021)
- National Honor Society (NHS) (2019-2021)
- National Honor Society of Boy Scouts of America (BSA) Order of the Arrow (OA) (2016-present)
- Academic Excellence for Engineering Design and Development (2020-2021)

EXTRA-CURRICULAR EXPERIENCE

- Follows latest US space launches and advancements in space industry
- Completed 225 hours of volunteer service while in boy scouts through helping with various conservation projects, community, and church events
- Professional Disc Golf Association (2020-Present)
- BSA National Youth Leadership Training (NYLT) (2017)