Josh Stockin

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Education

- **University of Illinois Urbana-Champaign**   Technical GPA 3.91 / 4.00   *August 2022 – December 2025*
  B.S. in Systems Engineering, Secondary Field in Computer Science   Champaign, IL
  Member of the *Institute of Industrial and Systems Engineers (IISE)*

Work Experience

- **Milwaukee Electric Tool Corporation**   *May 2025 – August 2025*
  Firmware Engineering Intern, System Integration Support   Brookfield, WI
  - Worked for 11 weeks on an engineering support team extending resources for troubleshooting, bug fixes, and feature requests to product development and testing teams company-wide
  - Integrated firmware for internal tooling saving 2 GPIO pins on platform designs
  - Provided debugging support on motor control, data logging, IoT module, and more
  - Undertook initiative to make internal documentation more visible and easily accessible

- **Milwaukee Electric Tool Corporation**   *June 2024 – August 2024*
  Firmware Engineering Intern, System Integration Support   Brookfield, WI
  - Worked for 10 weeks on an engineering support team extending resources for troubleshooting, bug fixes, and feature requests to product development and testing teams company-wide
  - Contributed changes and fixes to 8 products across 3 business units
  - Provided firmware support on tool hardware design changes saving at least **$3,000,000/yr** across 12 products
  - Implemented firmware that saves a GPIO pin on M18 platform design, reducing hardware cost and complexity

- **Milwaukee Electric Tool Corporation**   *June 2023 – August 2023*
  Firmware Engineering Intern, Advanced Charger Platform Development   Brookfield, WI
  - Worked for 10 weeks on a product development team for the M18 TOP-OFF Charger & Power Supply
  - Helped set precedent for writing and testing UL 60730-compliant (Class B) protection-critical firmware
  - Reduced subsystem code size by 50% while increasing speed and extending functionality
  - Employed methods of test-driven development by automating unit tests with GoogleTest

- **Reed-Custer High School**   *August 2021 – August 2022*
  Associate, Information Technology (IT)   Braidwood, IL
  - Performed district-wide systems administration duties with Windows Server, Microsoft Azure, MSSQL, and related management technologies
  - Earned certification in servicing HP commercial end user desktops, workstations, and laptops

Independent Technical Projects

- **ESPy (Remote-Controlled Snow Plow)**   *November 2018 – Present*
  Experience: Firmware Engineering, Robotics, Embedded Systems, Power Electronics, Motor Control
  - Engineered a remote-controlled snow plow to push snow and salt pavement
  - Designed and assembled electrical system/robotics with 12V batteries, electric wheelchair motors, linear actuators, motor controllers, radio receiver, and a microcontroller
  - Programmed an ESP32 dual-core microcontroller with C language, ESP-IDF, and FreeRTOS
  - Ongoing project to design a single PCBA with on-board battery charging, motor control, and peripherals

Honors & Awards

2023-2024   UIUC Grainger College of Engineering Dean's List for Academic Excellence
2022   National Merit Scholarship Finalist
         EIU Academic Challenge for Engineering and Science – 3rd Place in State for Computer Science
2021   Illinois State Scholar