Hung (Henry) Do

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EDUCATION

University of Minnesota, Twin Cities **Minneapolis, MN**
Bachelor of Electrical Engineering *Expected December 2026*
Relevant CourseWork: Transmission Lines/Fields/Waves, Linear Control Systems, Power Electronics, Power System Analysis

RELEVANT EXPERIENCE

Electrical Subteam Member **August 2025 - Present**
Gopher Motorsports, University of Minnesota, Minneapolis, MN

- Reviewed schematic and designed PCB for Battery Management System in Altium, worked on soldering and SMT reflow soldering boards for components after ordering the board from the manufacturer
- Made the component selection process for a heat sensor with 3 connector wires, performed work as a team with the testing and validation of a DC/DC buck converter with a multimeter and oscilloscope

Undergraduate Student Researcher **October 2024 – May 2025**
Electronic Group, University of Minnesota, Minneapolis, MN

- Led a team to finish a multi-stage analog front-end for an ECG/EKG system, achieving a total signal gain of 1000 for capturing low-amplitude (1-2 mV) signals from the body.
- Designed PCB and schematic (Altium), simulation (LTspice) of an ECG circuit. Decided component selection for the instrumental amplifier, non-inverting amplifier, resistors, and capacitors.
- Designed an RC filter to capture frequency at 0.04 Hz, which helped reduce distortion, and designed a feedback loop to cut off at 1.6 Hz to limit the current flow into the patient under normal conditions.

Assembler **June 2022 – September 2022**
Danfoss, Eden Prairie, MN

- Diagnosed malfunctions in hydraulic and mechanical components using pressure gauges, assembled and tested over 500 electromechanical and hydraulic motors following the technical schematics
- Assisted in controlling hydraulic components, helped maintain a 99%+ pass rate in final quality testing, partnered with the engineering team, providing feedback, and helped increase production chain efficiency by up to 15%

PROJECT EXPERIENCE

Grid Inverter System Design, Eden Prairie, MN **May 2025 – August 2025**

- Designed and modeled a 250W grid inverter in MATLAB/Simulink to validate the complete system design, achieved a simulated power factor of 0.99, and a current Total Harmonic Distortion of less than 3%
- Designed a custom 2-layer PCB (in KiCAD) for the H-bridge power stage and control circuit. Implemented a real-time Software PLL and PR controller in C++ on an STM32 microcontroller
- Verified hardware performance against the simulation, confirmed a simulation against hardware with an error of less than 2%

SKILLS

Hardware: STM32 & PIC24 Microcontrollers, Nexys A7 FPGA, Raspberry Pi, 3D Printers, Lab Equipment

CAD: Altium, KiCAD, AutoCAD, Fusion 360, Onshape

Software: Vivado, LTSpice, SolidWorks, Matlab/Simulink, Excel, Microsoft Office

Programming Languages: C, C++, PIC24, Verilog, VHDL, Assembly, MPLab X IDE, Git (Gitlab, GitHub)

CERTIFICATES

Power Electronics Specialization, University of Colorado Boulder, coursera.org, August 2025