Sophornnret Peou

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RESEARCH & INTERESTS Creative, motivated in seeking for new experiences in electrical/software engineering. Integration and technology of renewable energy sources, circuit design and controls.

EDUCATION & TRAINING

Bachelor of Science in Electrical Engineering July 2020 - December 2022
Double Concentration: Power Electronics and Drive, Sustainable Power System
University of Washington, Seattle Washington (FINISHED CAPSTONE)

Associate in Science September 2017 - June 2020
Edmonds College

Certificate of Java Developer June 2019

SOFTWARE & DIGI TOOLS ALTIUM Design, JAVA, MATLAB/Python/C, Visual Studio, PLECS, LT spice
Microsoft Tools, Microsoft Visual Studios, Google Suite, Code Composer Studio.

EXPERIENCE

Undergraduate Lab Research/Experiment, Seattle [E-bike] September 2020 - June 2022

"Under guidance of Prof. Brian Johnson and his team" [E- Bike Project]

- Safety first – always practice with safety as priority, respect procedure and guide.
- Components picking, datasheet specs, filtering, calculation, and making budget list.
- Build multi-stages complex boost converter(DC to DC) to 3 phase BLDC motor.
- PCB, Altium Design: Schematic, layout design, test points and plan, for fabrication.
- Solder PCB Boards with micro components, lead/ no lead, heat gun and solder paste.
- Understanding of close loop and open loop controller, technical drawing, instruction, and specification. Components, PCB, control system quality test.
- Experience with graphing, plotting, bode plots, system stability, and simulation.
- Embedded, micro-controller with different signal or mixed signal design to the system.
- Arrange test plans/test strategy, troubleshooting the system stage by stage.
- Implemented controller codes to hardware "TI DSP" for controlling system power flow and tracking voltage, current, speed regulation of the bike motor, ADC/DAC input/out.
- Functional System Test: Open loop, closed loop, system integration controller testing.

Computer Hardware Components /Software Assembly February 2018 - Present

- Computer system debugging include hardware, firmware, and software.
- Finding defects, analyze errors, replace components, and apply solutions.
- Reading Specs and Manual to compare suitable components to use.
- Wiring the system and cable managing to avoid hazard events that could happen.

Hand Crafting, Cars, Utility and Equipment January 2018 – Present

- Replacement home water heater tank, procedure and instruction must be followed
- Car Oil filter replacement, tire replacement, fix tire, disassemble and assemble Cylinder refill brake fluid.
- Redesign household interior including repainting, decoration, and repair.

Electronic Wire Assembler June 2017 – August 2017

- At Symmetry Electronics – Woodinville, WA
- Performing hand soldering, surface mount components under microscope.
- Following instructions, blueprints specifications, gathering parts, inspect ensure quality.
- Test light, electrical equipment, label products, routing/cabling & wire bundle basics -
- Wire installation follow engineering drawings and online instructions.

	WSOS Mentorship Program	Fall2019 - Spring 2021
AWARDS & HONORS	Undergraduate Scholarship Awarded UW, Seattle, WA	Fall 2022
	Washington State Opportunity Scholarship - Seattle, WA	Fall 2019 - Spring 2022
	Foundation Scholarship EDCC - BOEING, MICROSOFT	Fall 2019 - Spring 2020
	Certificate of Honor Roll Award of Academic Achievement	Fall 2018 – Spring 2020

RELEVENT SKILL & ABILITY

As a Team

- Always on time, respect each other time and value other opinions.
- Communicate with crew members in an efficient way and befriend the surrounding
- Pick up where crew mates lost and make up for the works when there errors
- Always doing my job efficiently according work flow
- Organize work space, keeping tools and supplies at proper location after finish
- Always think of everyone safety during the procedure of training and experiments
- Positive thinking and encouraging others that around
- Have fun working together and enjoy each other company
- Don't like complaining, love to act and get things done

Self-Ability

- Calculating, solving equation, unit conversion both by hand and using software
- PCB boards and micro components handling
- Computer components familiar
- Software research, usage and comparison experiments, which one more user friendly
- Able to work in a fast pace environment
- Volunteers and finishing work on time
- Strong communication skills
- Experience with Computing systems online
- Ability to learn in fast paced environment
- Data collection, data analysis, using data processing tools, measurements
- Carrying, lifting, and moving stuff around
- Always organize and regulate work flow according to work time and schedule given
- Start early, easier to fix mistakes that I've made, and have more time to reconsider
- Ability to read and write and understand complex instruction, blueprints, and procedure
- Wiring, cabling, and wire gauge understanding
- circuit analysis, using theories such as ohm law, KVL, KCL, superposition
- Experience with Python, C, Java, and MATLAB.
- Experience with software design such as Adobe Photoshop, Fusion 360, Video Editor
- Experience with graphing, plotting, bode plots, system stability test, and simulation

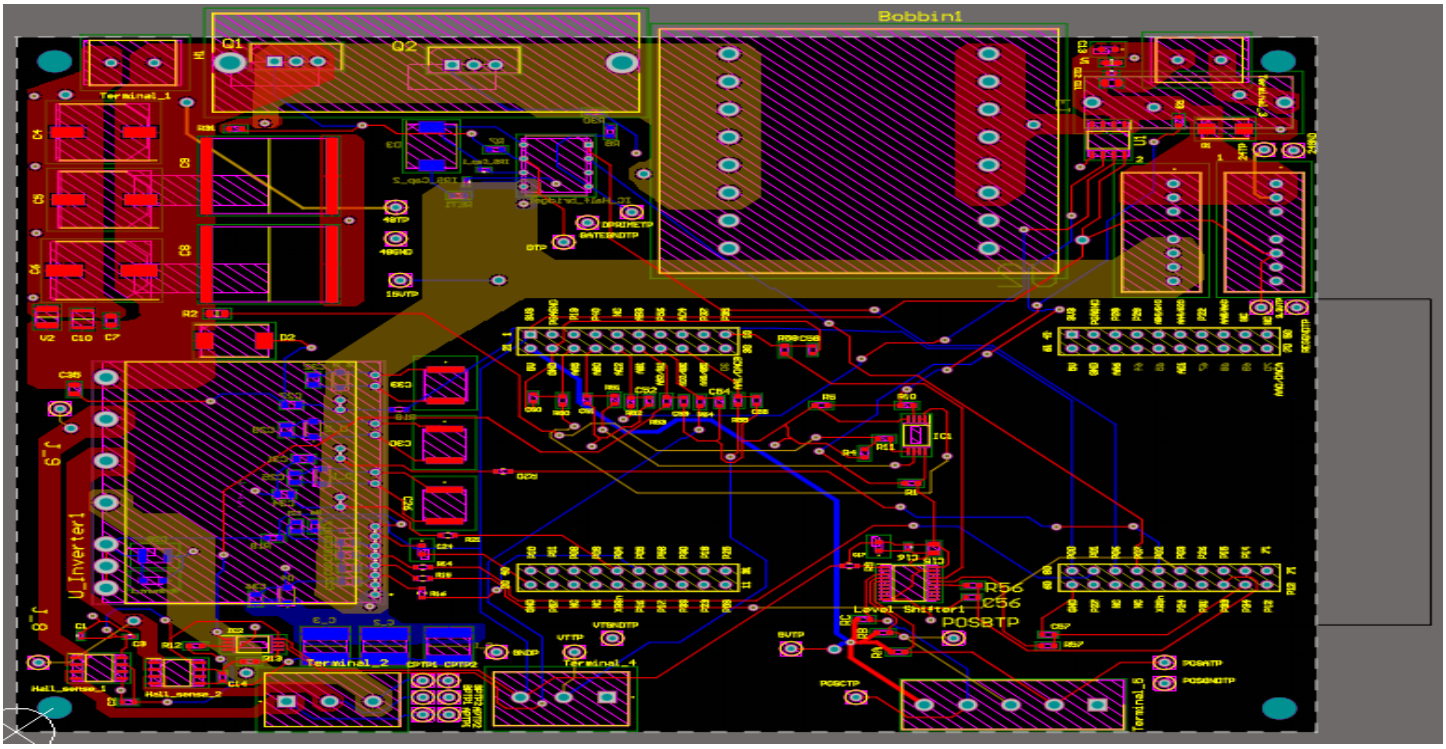
HAND TOOLS & MECH/ELECTRIC

Hand Tools & Electrical Tools

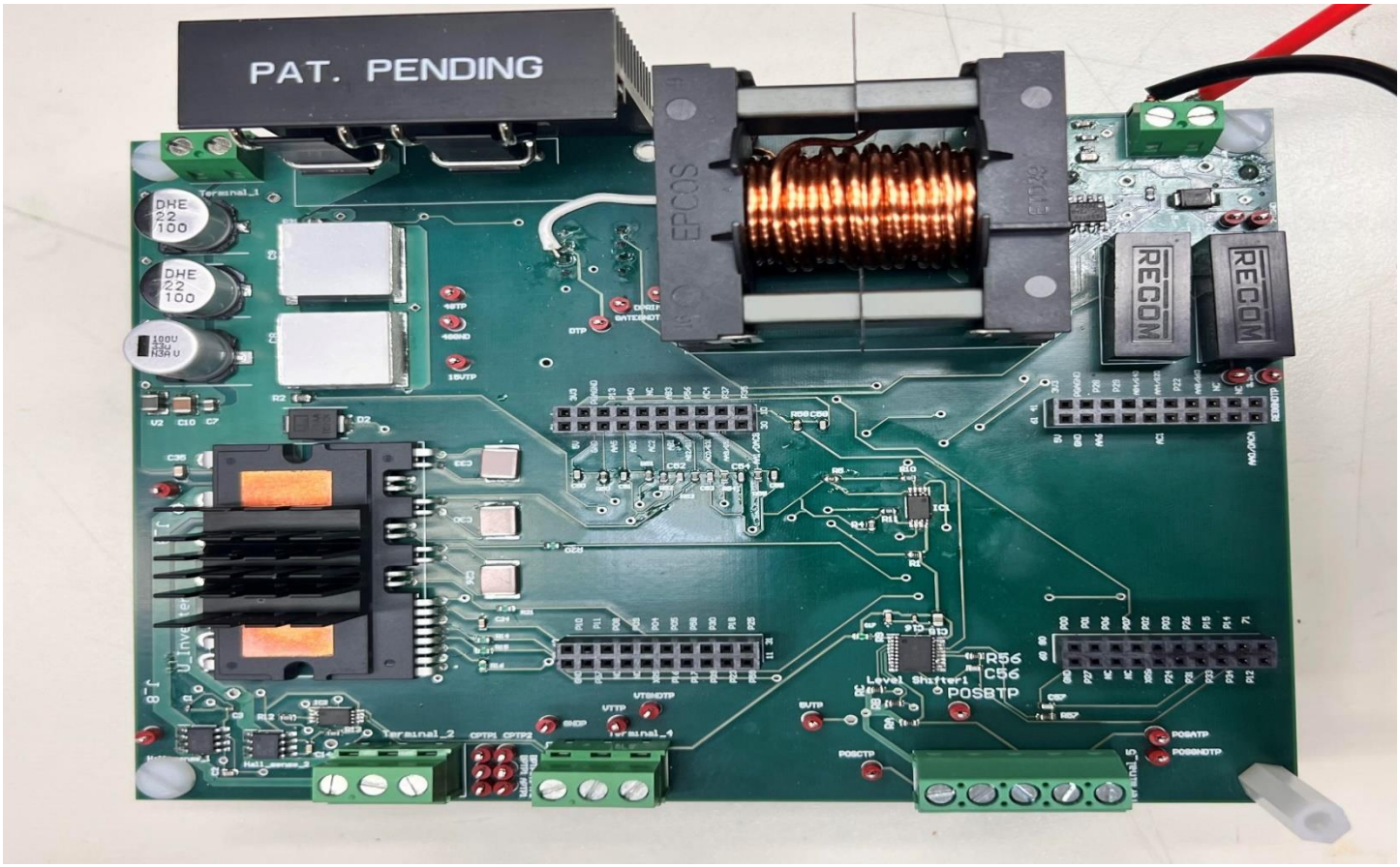
- Screwdrivers, multi head detachable screwdriver, socket wrench, adjustable wrench, adjustable socket wrench, wire cutter, plier, wire stripper, clamps, hammer, calk-gun.
- Soldering guns, heat gun with paste (also soldering tool), Oscilloscopes,.
- Electric drill with multiple drill bits, dust blower, electric air compress cleaner, soldering iron, multi-meter, electric saw, wood and stud scanner, electrical screwdriver.

Mechanical Tools and Measuring Tools

- Tire pressure calibrator, oil filter wrench, grinder, tire torque wrench, table saw
- Rulers, measuring tape, multi-meter, measuring string, flat surface measuring tools, measuring mat, Digital Voltmeter, AC/DC PSU, power meter.



PCB Layout: DC to AC three phases system to power up E-Bike motor (ground plane invisible)



DC to AC hardware board integrated and tested