BRINDYN E. SCHULTZ

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HIGHLIGHTS OF QUALIFICATIONS

- Proficient in interdisciplinary fields including Semiconductor Design, Hardware-Software Systems Integration, and Data Processing
- Skilled in a variety of hardware domains encompassing Power Electronics, Logic Controllers, and Manufacturing Equipment
- Advanced in an array of computer languages spanning C++, Python, G/M Code for CNC Applications, and Hardware Description Languages
- Knowledgeable in a spectrum of technical platforms including MATLAB, KiCad, GitHub, and Cloud Services

SUMMARY OF TECHNICAL QUALIFICATIONS

APPLICATIONS:

- MATLAB, Octave, KiCad, AutoCAD, Vivado, Google Workspace, Visual Studio Code, GitHub, Microsoft Azure, Amazon AWS, UTM, Virtualbox

HARDWARE:

- Power Electronics, Printed Circuit Boards, Raspberry Pi, Arduino, Programmable Logic Controllers, Computer Numerical Control Mills and Lathes, 3D Printers

COMPUTER LANGUAGES:

- *Software*: C, C++, CNC G/M Code, Python, HTML, CSS, JavaScript, C#, JSON
- *Hardware*: VHDL, Verilog, ARMv8, x86

PROFICIENCIES:

- Electric Circuits, Electronic Design, Signal Processing, Control Systems Design, Power Systems, Manufacturing, Physics, Chemistry, Semiconductor Design, Energy Generation, Automation, Field-Programmable Gate Array Devices, Precision Metrology

EDUCATION

Bachelor of Science in Electrical & Computer Engineering — Expected: May 2024
Lewis University, Romeoville, IL — GPA: 3.30/4.0
Minor: Mathematics

Bachelor of Science in Computer Science — Expected: May 2024
Lewis University, Romeoville, IL — GPA: 3.63/4.0

WORK EXPERIENCE

Student Chemistry Researcher — October 2023 – Present
Kissel Lab, Romeoville, IL

- Collaborated with a team of chemistry researchers to discover a reliable, low-cost method for producing hydrogen gas. Utilized my physics knowledge to create an equipment setup for measuring low volumes of gases with high accuracy.

CNC Vertical Mill Machinist — August 2023 – Present
CNC Machinist Trainee — January 2023 – August 2023
Walco Tool & Engineering, Romeoville, IL

- Coordinated with other machinists to manufacture parts for a variety of industries with an emphasis on quality. Operated workshop equipment regularly and performed daily preventative maintenance. Consulted skilled manufacturing engineers and project engineers to optimize workshop efficiency.

Student Engineering Assistant November 2021 – January 2023
Lewis University, Romeoville, IL

- Upgraded a lab's inventory system by implementing a mobile app with an easy-to-use check-in and check-out system. Integrated RFID in the lab for larger equipment. Developed a program for the ECE department to auto-populate fields of a PDF. Created and benchmarked instructional labs for use in freshman and sophomore level undergraduate ECE classes.

NOTABLE PROJECTS

DYNAMIC ALL-ELECTRIC VEHICLE WITH INTELLIGENT DEVICES:

- *Electrical Engineering Senior Capstone*
- Engineered an electric go-kart from a salvaged lawnmower, showcasing ingenuity in sustainable transportation. The vehicle was designed from scratch, incorporating an advanced object-detection system for automatic brake activation, enhancing safety and efficiency.

PIP-1 COMPUTER IN MINECRAFT:

- During a computer architecture course, exploration of the theoretical PIP-1 computer led to the recreation of it in Minecraft, documented in a YouTube video and presented in class. This endeavor deepened understanding of electronic systems and sparked engaging discussions among classmates.

SPORTS PREDICTION IN EXCEL:

- Foundations in linear algebra, data science, and VBA programming were leveraged to develop a sports prediction interface tailored for forecasting NFL game outcomes. Originally aiming for a 60-65% prediction accuracy, expectations were surpassed by achieving an impressive 70% success rate on average.

HONORS & AWARDS

IEEE Region 4 Chicago Certificate of Appreciation

- Recognized for exceptional leadership and valued services to the community as the Lewis University IEEE Student Branch Vice Chair, 2021.

Lewis University Dean's List

- Recipient of Dean's List recognition for academic excellence in Computer Engineering and Computer Science, Spring 2021 – Fall 2023.

LEADERSHIP & ACTIVITIES

- Lewis University IEEE Student Branch, 2021 – Present
  Chair, 2022
  Vice Chair, 2021
  Member, 2021

- Lewis University Society of Physics Students, 2021 – Present
  Member, 2021

- Lewis University Chess Club, 2021 – Present
  Vice President, 2023
  Founding President, 2021

SPOKEN LANGUAGES

- Spanish-Fluent (Second Language)