

Suhaib Abugdera

3159 Scenic Lake Drive, Apt#23, Ann Arbor, MI 48108

suhaibabugdera@gmail.com

Mobile Phone: 612.400.3241

<https://github.com/Sohayab>

Objective

Electrical engineering major with extensive knowledge and skills in electrical engineering and passionate about power systems and their applications, seeking an advanced degree in the field for continuous growth and future advancement in the profession. Aiming to bring a combination of creativity, innovation, and advanced technical expertise to deal with technical ambiguity and to tackle some of the most significant, complex, and challenging issues that our world is currently facing

Education

Bachelor of Science in Electrical and Electronics Engineering GPA 3.81/4.00

St. Cloud State University: <https://www.stcloudstate.edu/>

May 2023

St. Cloud, MN

Associate Degree in Electrical Engineering GPA 3.96/4.00

Century College: <https://www.century.edu/>

May 2020

White Bear Lake, MN

Three-Years Diploma in Electrical Engineering - Power Distribution GPA N/A

The Higher Institute of Polytechnic Professions: <http://zst.edu.ly/>

May 2004

Zahra City, Libya

Relevant Experiences

Electrical Engineer

Black & Veatch, Ann Arbor, Michigan, United States

June 2023- current

- Substation Design (MV/HV/EHV), range 23/34.5/115/230/345/500kV, including calculation (Lighting, Lightning, AC&DC, Voltage Drop, Conduit Fill), layout, single-line/three-line diagrams, tripping diagrams, control panels, AC/DC schematics, wiring drawings, protection, sequencing, greenfield, brownfield, remote end connections, and other technical documents such as construction specs, equipment specs, and vendor approvals
- Performing research on various equipment and materials used in the substation design process; This involves analyzing technical specifications, performance data, proposals, and cost estimate
- Actively participating in presentations, learning events, and seminars by various vendors related to the electrical grid and electrical equipment
- Engaging in employer training sessions related to electrical engineering disciplines, focusing on substations, transmission lines, generation, renewables, solar energy, and data centers

Senior Electrical Engineering Intern

Xcel Energy Inc. Sherco Power Plant, Becker, Minnesota, United States

May 2022 - Aug 2022

- Worked on building auxiliary boilers and supported Capitol Projects by completing replacement and upgrading systems for existing projects

Junior Electrical Engineering Intern

Xcel Energy Inc. Sherco Power Plant, Becker, Minnesota, United States

June 2021 - Aug 2021

- Worked on building auxiliary boilers; handled multiple tasks using the required specifications and electrical drawings to install the auxiliary boilers' electrical room, which involved civil work and electrical components such as cable trays, MCCs, SUS XFMR, DCS, control panels, relays, and switchgears
- Participated in the design, commissioning, and startup of the lightning protection system for the auxiliary boilers project
- Supported Capitol Projects by completing replacement and upgrading systems for existing projects

Engineering Coordinator

Cordoba Company for Engineering Services and Consultation, Libya

Feb 2012 - May 2015

- Collaborated directly with the client at the client site through active listening to determine their needs and provide insight to the design team
- Reviewed electrical and architectural designs with clients using drawings and schematics to change or modify if needed ensuring the designs meet their expectations
- Assisted with engineering projects by communicating with the client and designers ensuring projects are completed in a timely manner

Electrical Engineering Management

Libyan Brazilian Construction and Development Company, Libya

Aug 2008- Feb 2011

- Supervised a team of more than 50 local and international individuals on the construction site by communicating with their foremen or individually resulting in smooth work and leadership
- Delegated and monitored progress and productivity on maintenance, lighting, and installation using AutoCAD which resulted in meeting the client's specifications
- Provided leadership and knowledge expertise to other team members and other constituencies as needed after discussion with the supervisor and production department for better organization and work quality

Senior Meters Reader

General Electricity Company of Libya

Dec 2005 - Dec 2008

- Inspected and provided quotes prior to installing electricity and meters from the grid to consumers using the schematics to measure the load and calculate the expected load resulting in smooth service and protected grid from overload
- Reading meters, alert consumers and provide advice for better consumption, using a reader device to input the consumption and sending the bills resulting in customer's satisfactory

Other Experiences

Teaching Assistant

St. Cloud State University, St Cloud, MN

Aug 2022 – May 2023

- Teaching assistant for Circuit Analysis and Engineering Electromagnetics classes for 40 students; assisted professor with labs, grading, and run problem-solving sessions

Teaching Assistant

Century College, White Bear Lake, MN

Aug 2019 - May 2020

- Teaching Assistance for general chemistry and general physics before and after class hours to 50 students per week assisting students with homework, problem-solving, and explaining the class's material
- Assisted the professor during lectures and labs by answering students' questions and explaining the concepts related to chemistry and physics classes

Skills

- Knowledgeable of SolidWorks, Python, C++, Java, MATLAB, ARM Assembly, PIC24, FPGA, Altium designer (PCB), EAGLE (PCB), Power World, ETAP, PSIM, LTSPICE, PSpice, and CST Studio
- Microsoft Office Suite, Internet, IT, and security

Introduction Courses and Training

Electrical Engineering:

- Classic Control and PLC1 | Power System Distribution | Low Lighting Design | Hydraulic and Pneumatic | Power System Protection | Solar Energy System Design | Schneider Electrical Systems Fundamentals

Leadership and Management Training Courses:

- Century College Leadership Institute | Making Leaders Program | The Power of Decision-Making | The Power of Effective Communication | Professional Employee Diploma | The Basics of Modern Management | Teamwork | Strategic Planning | Time Management | Fundamentals of Project Execution

Others:

- Extensive employer-provided electrical engineering training in power delivery, generation, data centers, miscellaneous topics, seminars, leadership, and management
- Occupational Health and Safety – Basics of First Aid – Basic Fire Fighting (Al Wekaya Company & Petroleum Training & Qualifying Institute)

Volunteering

- International Coastal Cleanup by Ocean Conservancy – Michigan, September 2025
- STEM Day at the State Fair sponsored by Works Museum – Minnesota, August 2022
- MRES 2022 State Fair Eco Experience – Minnesota, August 2022

- Granite City Days, celebrate World Heritage Day – St. Cloud, June 2021

Research

- Knowledge of academic research from Critical Thinking in Academic Research class
- Conducted research in St. Cloud State University in power electronics to module transistors as temperature sensors Spring 2023

Class Project/Papers [<https://github.com/Sohayab>]

1. Design a DC-DC IC Buck Converter Power Supply from a 120/48Vrms transformer; individual work for class ECE 411 Power Electronics; December 2021
2. Real-time Digital Signal Processing using FIR filter, Wireless Digital Oscilloscope, and Spectral Analyzer; individual work for class ECE 422 Microcontroller System Design; December 2021
3. Design and Application of a Current Feedback Operational Amplifier (CFOA); individual work for class ECE 316 Analog Electronics; April 2021
4. Power Management System Design for Power Supply and Battery Charger Controller; individual work for ECE 461/462 Senior Design Project Fall 2022/Spring 2023
5. Real-Time Sensor Network Monitoring with SmartMesh IP; teamwork for ECE 461/462 Senior Design Project Fall 2022/Spring 2023
6. Investigating the Impact of Ambient Temperature on MOSFET in BUCK Converters, SEPIC Converters, and Power Supply PCB Board (Unpublished)

License and Exams

Electrical Engineering Fundamentals License Exam ‘EIT’, Dec 2023

State of Michigan

Conferences & Presentations

- Minnesota Power Systems Conference (MIPSYCON) Saint Paul/Nov 2024
- State Capitol Presentation Saint Paul/Mar 2023
<https://symposium.foragerone.com/2023-posters-at-st-paul/presentations/50728>

Awards and Achievements

- First Place Presentation Winner, State Capitol, Saint Paul/Mar 2023. Presented a SmartMesh IP Wireless Sensor Network IoT (Team of four classmates St. Cloud State University)
<https://today.stcloudstate.edu/2023/05/01/wireless-sensor-network-project-has-history-of-success-at-scsu/>
- Xcel Energy Power Scholarship in Electrical Engineering Fall 2022/ Spring 2023