WAJID HUSSAIN

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Summary:

Seeking opportunities to apply expertise in advanced technologies and engineering principles to develop innovative, scalable solutions for complex challenges in industry. Passionate about leveraging technical skills and research experience to drive impactful, real-world applications and contribute to the development of next-generation systems.

Key Skills:

Technical Skills: AutoCAD, Python, Git, Linux, SQL, Wireshark, Docker, AWS, Java, Microsoft Office
Certifications: Lean Six Sigma Yellow Belt (edX, TUM School of Management, Germany); Chartered Engineer (Institution of Engineers India)
Research Interests: IoT, Cyber-Physical Systems, Embedded Systems, and Machine Learning Applications

Education:

Northeastern University   Toronto, Canada
- *Master of Science in Cyber-Physical Systems*   2023 - 2025

Jawaharlal Nehru Technological University   Hyderabad, India
- *Bachelor of Technology in Electrical & Electronics Engineering*   2004 - 2008

Academic and Volunteer Experience:

Graduate Teaching Assistant, Northeastern University, Toronto, ON   **Jan. 2024 to Present**
TELE6510: Fundamentals of Internet of Things (IoT), Dr. Rolando Herrero and Dr. Haitham Tayyar
- Assisted instructors with course organization, facilitated discussions, and graded assignments over three semesters (Spring 2024, Fall 2024 and Spring 2025).
- Delivered constructive feedback to students, enhancing their understanding of IoT systems and applications.

Student Representative – Program Advisory Committee (PAC), Northeastern University, Toronto, ON
- Represented the MS Cyber-Physical Systems program during the PAC meeting (December 2024).
- Collaborated with industry leaders (CEOs, CTOs) to provide actionable insights for curriculum enhancement and program development.

Student Representative – PEQAB Site Visit, Northeastern University, Toronto, ON
- Served as student representatives for the College of Engineering and the Northeastern Toronto Campus for the Postsecondary Education Quality Assessment Board (PEQAB) site visit (April 2024).

Nominated for Outstanding Master's Student Award in Leadership for COE, Northeastern University
- Recognized for exceptional contributions to the academic community, leadership in planning and supporting the Toronto Smart Systems and IoT Club, and active participation in the Student Interest Group (SIG) and Program Advisory Committee (PAC).

Professional Experience:

Electrical Engineer / MEP Coordinator   **2014 to 2020**
ABV Rock Group   **Riyadh, Saudi Arabia**
- Supervised the installation, testing, and commissioning of comprehensive MEP systems, including over 50 elevators, five 2.5 MVA gensets with synchronizing panels, and a helipad for MOI.
- Managed the integration and handover of key systems such as Schneider Electric switchgear, Honeywell and Schneider Electric BMS systems, and various IT, public address, and CCTV systems.
- Ensured successful project delivery by providing thorough documentation and training to clients for efficient operation and maintenance of all systems.

Electrical Engineer / MEP Coordinator   **2013 to 2014**
Dubai Contracting Company   **Riyadh, Saudi Arabia**
- Reviewed and analyzed all MEP drawings, materials, schedules, and programs for the Burj Rafal project in Riyadh to ensure alignment with project requirements.
- Coordinated electro-mechanical site activities, collaborating effectively with multiple teams to achieve seamless execution and compliance with project specifications.
- Maintained strong communication between contractors and consultants, producing detailed weekly reports and activity plans while adhering to DCC HSE standards and contractual obligations for both site and administrative operations.

Electrical Engineer   **2010 to 2012**
World Energy Contracting Company   **Dammam, Saudi Arabia**
- Supervised the on-site installation of switchgear and the cable laying/termination process for multiple Saudi Electricity Company (SEC) projects in the Eastern Region of Saudi Arabia.
- Led the installation, testing, and commissioning of relay protection panels and digital fault recorders at major SEC projects, including Al-Andalus SS and Hafar 1 & 4 Sub-Stations.

Professional Projects: *List of Notable Projects in Construction*

- King Saud University Medical City
- Security Forces Medical Center
- Ministry of Interior HQ – Helipad
- Burj Rafal – Hotel Kempinski
- Rafal Residence – Ascott Riyadh
- Aramco – Shaybah Gas Plant

Academic Projects:

Intelligent Solar Panel Orientation System (Capstone Project)
- Developed an IoT-based solar tracker using ESP32-CAM for image processing and Wi-Fi/LoRa for actuation commands from an ML-enabled edge device. Integrated MQTT-based cloud services for real-time monitoring, combining edge computing with astronomical models for adaptive and efficient panel orientation.

End-to-End Cyber-Physical System for Temperature Monitoring and Control
- Built a real-time temperature monitoring system using ESP32, BMP280, and LoRa for data transmission with LED control based on temperature trends. Implemented FreeRTOS multitasking and inter-task communication to optimize sensor data flow and device control.

IoT System for Connected Devices (Course Project)
- Developed a comprehensive IoT system integrating sensors and actuators with cloud infrastructure, focusing on efficient data transmission and real-time analysis for remote device control.