Maryam Aminu Mukhtar

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EDUCATION

Northeastern University, Boston, MA — December 2025
Master of Science, Wireless and Network Engineering
Courses: Fundamentals of Computer Networks, Wireless Sensor Networks and the Internet of Things, Networked XR Systems

University of Massachusetts Boston, Boston, MA — May 2023
Bachelor of Science, Computer Engineering (magna cum laude)

- Awarded Engineering Department's Outstanding Achievement in Engineering Award for exceptional academic and research work

TECHNICAL SKILLS

- **Platforms:** Mac OS, Windows 10, Linux, Ubuntu, Raspberry Pi OS, Virtual Box
- **Languages:** MATLAB, Python, C/C++, shell scripting, ns-3 network simulator,
- **Development Tools:** Visual Studio, Arduino IDE, Raspberry Pi, Unity
- **Applications:** Microsoft Office Suite, MATLAB, GNU Radio, Wireshark, GitHub, Docker, Red Hat OpenShift
- **Experience with:** Data analysis, Machine Learning, Web server, Routing protocols, Network Protocols (LAN/WAN,TCP/IP, UDP)

SOFT SKILLS: Written and Verbal Communication, Leadership, Teamwork, Hard-working, Problem-solving, Project Management

PROJECT EXPERIENCE

University of Massachusetts Boston, Boston, MA
Augmented Reality Informational System (ARIS) for Astronauts, Capstone project — Sept 2022 – May 2023

- Led a multidisciplinary team in developing an augmented reality system that integrates sensors to provide astronauts with critical health and consumable data, utilizing Microsoft HoloLens for the AR display
- Engineered and implemented a sensor node using an Arduino to send data to a central hub, Raspberry Pi that also housed a robust server-client servers for efficient data collection and monitoring
- Programmed and managed the software aspects of the system using C#, Python, and Unity, with a focus on deploying machine learning algorithms for precise data analysis and classification
- Implemented wireless communication using RF XBee modules and IEEE 802.15.4 protocol, facilitating full-duplex data transmission and reception in simulated astronaut scenarios

Northeastern University, Boston, MA
Ad-Hoc WLAN Configuration and Analysis, EECE5155 Lab Project — Oct 2023

- Designed an ad-hoc WLAN operating on IEEE 802.11ac standards, simulating a 5-node network using a ns-3 network simulator
- Programmed the testbed in ad-hoc mode, where nodes functioned as routers with UDP Echo Server/Client applications, implemented node mobility, IP addressing, and collision management strategies (RTS/CTS) to implement real-time wireless network dynamics
- Utilized Wireshark for in-depth packet tracing, analyzing communication protocols and network behaviors, gaining insights into packet transmissions, collisions, and network management strategies

WORK EXPERIENCE

Sullivan and McLaughlin, Dorchester, MA
Wireless Tech Intern — May 2024 – December 2024

- Processed router orders using Salesforce and NetCloud, managed customer returns and ensured accuracy and operational efficiency
- Diagnosed and resolved issues for over 100 Cradle point routers, enhancing technical problem-solving skills and customer satisfaction
- Improved inventory accuracy by 90% by conducting and maintaining inventory, improving organizational skills and attention to detail

Institute for the Wireless Internet of Things, Northeastern University, Boston, MA
Lab Research Assistant — Sept 2023 – May 2024

- Contributed to projects by deploying Docker containers, including GNU Radio and web server environments to advance system efficiency and streamline operations
- Optimized sensor data for preprocessing initiatives using Python (NumPy and Pandas) to accurately prepare datasets, improving data organization for machine learning analysis
- Developed a web server using advanced data visualization techniques to deliver accessible, real-time data that significantly enhances project outcomes