

Sheik Murad Hassan Anik

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Work Experience

Virginia Polytechnic Institute and State University

Blacksburg, VA

Graduate Assistant

May 2018 to current

- Working as a research assistant in NiSE (iNnovations in Software Engineering) group
- Led research paper writing based on software engineering and building engineering research projects
- Instructed over 400 students in Software Development, Data Structures, Web Application Development courses

Ahsanullah University of Science and Technology

Dhaka, Bangladesh

Lecturer

April 2016 to August 2018

- Provided hands-on experience on Micro-controllers, Arduino, and, Raspberry Pi to more than 450 students in the MSD lab
- Guided 200+ students on Introduction to C and Java programming languages

Qubix Lab

Dhaka, Bangladesh

Software Engineer

February 2015 to May 2015

- Collaborated with a four-person team to develop a web-based information collection system for the Bangladesh Bureau of Statistics
- Used PHP, HTML, JavaScript, and, MySQL to enable mass data-collection automation of local industries

Projects

Distributed Indoor Environmental Sensing System

Blacksburg, VA

Virginia Polytechnic Institute and State University

May 2020

- Developed IoT-based wireless sensing system and deployed 50+ sensing nodes to individual houses
- Collected and analyzed over 2 million records from deployed devices for research

Machine Learning Approach in Building Occupant Persona Development

Blacksburg, VA

Virginia Polytechnic Institute and State University

October 2022

- Applied 6 state-of-the-art machine learning models for automatic building occupant characteristics classification and prediction
- Demonstrated the feasibility of ML techniques in occupant behavior characterization with data from 5686 U.S. households

Characterization of automation configuration issues in smart home systems

Blacksburg, VA

Virginia Polytechnic Institute and State University

December 2019

- Accumulated 450 automation configuration issues faced during the development of smart home systems
- Conducted a manual investigation for issue classification, finding patterns in issues and their respective solutions

Heavy Aerial Lifting Multi-Copter

Dhaka, Bangladesh

Ahsanullah University of Science and Technology

December 2013

- Designed H-copter, X-copter, and, Hex-copter from scratch equipped with MultiWii flight controller
- Used Arduino and Raspberry Pi to do tasks like aerial photography, live object detection, and, object grab-release

Skills

Programming Languages Python, Java, C#, PHP, JavaScript

Databases MySQL, MS-SQL, PostgreSQL

Frameworks/Libraries Pandas, Scikit-learn, PyTorch, Flask, ASP.NET, OpenGL, OpenCV

Tools Git, Matlab, Visual Studio, Eclipse, PowerBi

Education

Virginia Polytechnic Institute and State University

Blacksburg, VA

Ph.D. in Computer Science and Applications

December 2023 (Expected)

Ahsanullah University of Science and Technology

Dhaka, Bangladesh

B.Sc. in Computer Science and Engineering

January 2016

Publications

A cost-effective, scalable, and portable IoT data infrastructure for indoor environment sensing

Sheik Murad Hassan Anik, Xinghua Gao, Na Meng, Philip R Agee, Andrew P McCoy

Journal of Building Engineering 49 (2022) p. 104027. Elsevier, 2022

Towards Automated Occupant Profile Creation in Smart Buildings: A machine learning-enabled approach for user persona generation

Sheik Murad Hassan Anik, Xinghua Gao, Na Meng

Energy and Buildings (2023) p. 113485. Elsevier, 2023

Automation in building occupant profile development: a machine learning- and persona-enabled approach

Sheik Murad Hassan Anik, Xinghua Gao, Na Meng

Accepted at Construction Research Congress, 2024