

Syed Salman Rahman

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Address: Brooklyn, New York City, NY, USA

EDUCATION

Master's in Electrical Engineering

Sept 2021 – 2023

New York University Tandon School of Engineering, United States

- Courses Taken: Internet Architecture & Protocols, Real-Time Embedded Systems, Programming for Solving City Challenges, Probability and Stochastic Processes, Interactive Medical Robotics, Computer Systems Architecture.

Bachelor of Engineering in Electrical-Mechatronics

Sept 2016 – 2020

Universiti Teknologi Malaysia, Malaysia

- Thesis Title: Microfluidic Based Dielectrophoretic Cell Sorter for Cancer Detection
- Supervisor (Thesis): Assoc. Prof. Ridzuan Ahmad

EXPERIENCE

Course Assistant, Digital Logic and State Machine Design (CS 2204)

Department of ECE, Tandon School of Engineering, New York Univ. Sept 2021 – present

- Conducting Lab classes focusing on the synthesis of components using Verilog and demonstration on hardware using NEXYS 4 DDR FPGA board from Xilinx.
- Assisting students during the open lab hours and office hours and grading assignments and quizzes.

Research Assistant

Nov 2017– May 2018

Sustainable and Smart Broiler House Farming in Malaysia, Universiti Teknologi Malaysia, Johor Bahru, Malaysia:

- Worked under supervision of Assoc. Prof. Leow Pei Ling on the projects “Sustainable Farming with Green Technology” and “Sustainable Temperature Control for Broiler House in Malaysia”.
- Performed experimental setup, data collection, data analysis, technical writing.

Research Assistant

Mar 2019–April 2020

Advanced Telecommunication Technology Research Group, UTM, Malaysia:

- Investigated the availability and suitability of indoor localization techniques and investigated the performance of using RSSI based lateration technique and BLE beacons for indoor positioning.

Research and Development Intern

June 2019–Sep 2019

INNATES PLT, Johor Bahru, Malaysia

- Worked on a project named “Photovoltaic Energy Monitoring Systems (PVEMS)” for the client PETRONAS Global.
- Design and implement circuit for CTH sensor, Analog-Digital Converter (ADC), microcontroller, communication gateway and programming backend server and database.

PUBLICATIONS

Lau K.X., Leow P.L., Jamian J.J.,Arsat, R., Abdeltawab A.A.A., **Rahman S.S.**, Khalid N.H., A.Mohamed A. “Temperature Distribution Study for Malaysia Broiler House”, *2nd International Conference on Smart Sensors and Application, ICSSA*, 2018.

Lau K.X., Leow P.L., Jamian J.J.,Arsat, R., Abdeltawab A.A.A., **Rahman S.S.**, Khalid N.H., A.Mohamed A. “Harvesting electrical energy from rooftop ventilator”. *International Journal of Integrated Engineering.*, Vol.10, No.4, pp. 68-72, 2018.

Syed Salman Rahman, Mohd. Ridzuan, “Microfluidic Based Dielectrophoresis Cell Sorter for real-time cancer detection”, *3rd International Conference On Green Engineering & Technology 2021 (IConGETech2021)*.

Syed Salman Rahman, Afia Fahmida Rahman, Eliya Tazreena Tashbib, Masud Imran, Rozeha A. Rashid, M. A. Sarijari, “A Survey of IoT based Indoor Positioning Systems based on Bluetooth Low Energy Beacon”. (Submitted-Under review in *International Journal of Integrated Engineering*).

POSTER - PRESENTATIONS

- IoT based smart energy monitoring for Home appliances using Machine Learning. Grand Challenges Malaysia, 2019.
- Fiber optics – Future of Fiber optics, Theoretical difference of multi-mode and single mode fiber, Principle of Communication Knowledge Transfer Program by IEEE Malaysia & VTS Joint Chapter, 2018.
- Digital Irrigation and monitoring system using tailored sensors and dashboard. IUT 5th National ICT Fest, 2013.

PROJECTS

Wearable health tracker using 3-axis gyroscope – Real-time Embedded Systems Course Project

- (STM32f429, I3G4250D, SPI, Interrupt, Mbed, Filtering sampling noise, Average Moving Average, Python, C/C++)

Recycling Stations in NYC

- (Data Processing, Data Analysis, NumPy, Pandas, Plotly)

Facial-Recognition-Based Attendance System – Machine Vision Course Project

- (Local Binary Pattern Histogram, Haar Cascade, tkinter, numpy, pandas, openCV)

Smart mittens for Rheumatoid Arthritis patients – Competition

- (ESP8266 + Temp Sensor + BP sensor + Vibration)

4-Way Traffic Light Manual Control System – Microprocessor Course Project

- (ATMega32, Digital Design, Multiplexing, I2C, Proteus, C)

Centralized Information and Control System - Capstone project

- (IoT, HTTP, Data analytics, PHP, CSS Bootstrap)

RELEVANT SKILLS

Design, Modeling, Simulation: COMSOL Multiphysics, MATLAB, Proteus, Modelsim, NI Multisim, SolidWorks.

Signal Processing: Filter: Buffer, Converter, Amplifier

Programming Languages: Python, C/C++, Assembly (ARM and AVR arch.), Verilog.

Systems: Linux Kernel, GENI testbed

Image Processing/Machine Vision: OpenCV, PyTorch.

Data Analysis: Pandas, NumPy, Matplotlib, tkinter.

Embedded Systems: UART, I2C, SPI, Mbed, platformIO, AWS IoT.

Internet Architectural Protocols: TCP, UDP, HTTP, MQTT.

HONORS AND AWARDS

2021	Winner, Tandon Made Challenge. Track: AI for Good.
2020, 2018	Dean's List Award, School of Electrical Engineering, Universiti Teknologi Malaysia.
2019	2 nd Prize, Capstone project competition, School of Electrical Engineering, Universiti Teknologi Malaysia.
2019	3 rd Place, Grand Challenges Competition, Malaysia.
2018	Special Mention award, UNIMAKER Makeathon Challenge 2018
2015	Finalist, LaunchPad Bangladesh, Competition for young techno entrepreneurs in Bangladesh.
2015	Champion, Project Showcasing (Mechanical), 7 th National Science Fair, Bangladesh
2014	Daily Star Awards for outstanding results, Bangladesh.
2013	High School scholarship provided covering 75% of the yearly tuition fees, Oxford International School, Dhaka, Bangladesh.

LEADERSHIP

Sep '17– April '18	Crew member – Activity, TEDxUTM 2018.
Feb '17– Mar '18	Academic Director, GoldenKey International Honour Society, UTM chapter, Malaysia.
Nov '16– Mar '18	Member, IEEE UTM Branch.
Aug '13– Mar '15	President, ICT club, Oxford International School, Bangladesh.
Nov '13– Nov '14	Vice President, Scout Group, Oxford International School, Bangladesh.
Dec '12– Jan '14	Head of Social Service Team, Chokro, Bangladesh