Syeed Mohd Ameen

M.Tech ***(Software Engineering)***, Aligarh Muslim University, Aligarh
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Research Experience

AMU Roboclub, Aligarh | *PG Representative* Jun'22 – Jun'23

- Taking various workshops on (STM32, Arduino, Raspberry pi) development board.
- Supervise different projects group in the lab.
- Manage ABU Robocon (Asia Pacific Robot contest) team as leader and mentor.

AIET Robotics Lab | *Software Engineer Project Lead* Jul'18 – Feb'19

- Develop flight controller firmware using STM32 & AVR series of microcontroller (all the low-level subroutines written in assembly language in order to optimize every single byte and performance).
- Testing and debugging the raw data of accelerometer, gyroscope.
- Design flight controller PCB on Eagle EDA software.

Education

Aligarh Muslim University, Aligarh Nov'21 – Jul'23

Master of Technology *(Software Engineering)* | CPI – 7.9/10

- Thesis: Energy Efficient Heterogenous Multi core architecture for edge computing devices.

Rajasthan Technical University, Kota Jun'17 – Nov'21

Bachelor of Technology *(Computer Science & Engineering)* | 68.01 %

- Project: High Level Assembler for MCS-51 Instruction set architecture

Key Academic Projects

Smart city integration using google voice kit | Prof. Mohammad Sarosh Umar Autumn 2022

- Designed and implemented web-based **online** smart city monitoring system that integrated with various kind of sensors and detection systems.
- Designed the database and dependencies using MySQL that were required as the back-end of the application.
- I am specially working on google voice kit that used to broadcast the voice message.

FPU 8051 ***(fast floating-point calculation)*** |See project *(Github)*

- A fast Floating-point calculation subroutines design for Intel MCS – 51 instruction set architecture.
- All the subroutines written in MCS-51 Assembly language in order to optimize the performance and memory.

AT89S Programmer |See project *(GitHub)*

- Developed a Programmer for microchip **AT89Sxx** Series of IC's.
- Custom PCB design on KiCad EDA Software.
- Simple drag-drop hex file serial GUI based terminal designed.

High Level Assembler for 8051 | B.Tech final year Project Autumn 2021

- High level subroutines are added in assembler.
- Complex instructions that are not presented in MCS-51 (you can write) replaced with equivalent instructions.
- Open source, written in python 3.x.

Other Projects

- Automatic light switching system using PIR **motion detection** sensor.
- ESP32 Cam based object detection.
- ublox NEO – 6M GPS receiver-based data logger.
- Implemented **Generic A* algorithm** to solve problems such as 8-Puzzle Problem and Missionaries–Cannibals

Skills

Programming Languages: C, C++ (Advance), Java/python (Intermediate)
Softwares: Android Studio, Arduino IDE, Visual Studio
Web: HTML, CSS, JavaScript, Django, flask
Framewroks/libraries: Tensorflow, NumPy, Pandas, matplotlib
Database: MongoDB, MySQL
Communication protocols: I2C, SPI, UART, Zigbee, Bluetooth, 802.11
Programmable devices: AVR, PIC & ARM – based microcontrollers, EPS32, Raspberry pi, RP2040
FPGA Development: Verilog, familiarity with FPGA SDK (Xilinx Vivado), Basys – 3
Instruction set architecture: x86, AVR, RISC-V, MCS-51, 6502 (Assembly languages)

Personal Information

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