Syeed Mohd Ameen
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Work Experience

- **Jamia Millia Islamia *(University of Polytechnic)*** New Delhi, IN
  Lecturer, ***Computer Engineering Section*** *Aug 2024 - Present*
  - **Courses Taught**: Web Technology, Embedded System, Computer Organization & Architecture, Operating System, Computer Application, Computer Oriented Numerical Methods, C Programming, Data Structure & Algorithms

- **Indian Institute of Technology Delhi** New Delhi, IN
  Jr. Research Fellow, ***Embedded System Laboratory*** *May 2023 - May 2024*
  - **Design and development of a subsidence detection system in landslide prone hill slopes.**:
    - Design and development of firmware for MEMS IMU sensors using the ESP32 series SoC.
    - Sensor node PCB design using KiCad EDA software.
    - Testing and debugging device functionality and protocols using a logic analyzer.
    - Conducting deployment of sensor node activities in the lab.

Academic Qualifications

- **Master of Technology in Data Science** Jun'24 - Present
  Department of Computer Engineering FET, ***Jamia Millia Islamia*** *New Delhi, India*
  - **Relevant courses**: Data Mining, Mathematics for Data science, Natural Language Processing, Deep learning, Distributed and Cloud Computing, Internet of Things

- **Master of Technology in Software Engineering** Jun'21 - Jun'23
  Aligarh Muslim University (AMU), ***CGPA: 8.02/10.0*** *Aligarh, India*
  - **Relevant courses**: Advance Computer Architecture, Machine Learning, Image processing and Computer vision, Big Data Analytics, Numerical and Statistical Techniques

- **Bachelor of Technology in Computer Science and Engineering** Jun'17 - Jun'21
  Rajasthan Technical University, ***percentage: 68.01*** *Kota, India*
  - **Relevant courses**: Data Structure, Operating System, Design & Analysis of Algorithm, Data Base Management System, Compiler Design, Embedded System, Distributed System.

Key Academic Projects

- **miniflight: Budget flight controller for drone using ATmega328p microcontroller** - repository
  A budget flight controller for drones using the ATmega328P microcontroller offers an affordable yet efficient solution for controlling the flight dynamics of drones. Designed with cost-effectiveness in mind, this flight controller provides the essential features required for stable flight control while utilizing the capabilities of the ATmega328P microcontroller.
- **AT89S52: A SPI Programmer that can program AT89Sxx series of Microcontrollers** - repository
  Existing programmers of AT89Sxx series of IC's are costly and very messy to use, so we design and develop a simple easy to use programmer that can program AT89Sxx Series of IC's. (simple drag and drop hex file in serial terminal program)
- **Smart City Integration using google voice kit**
  I led the creation of a web-based smart city monitoring system, integrating various sensors and databases using MySQL. My specific role involved implementing the Google Voice Kit for efficient voice message broadcasting, contributing to a comprehensive solution for online smart city monitoring.

- **8051 FPU: Fast Floating Point Subrountines support for 8051 Microcontroller** - repository
  Designed and implemented Fast Floating Point Subroutine for the 8051 microcontroller, enhancing its computational capabilities with efficient IEEE 754 floating-point arithmetic for high-speed and precise calculations in resource-constrained environments.
- **Micro6502: 8-bit Computer using 6502 Microprocessor for Education purposes** - repository
  6502 Microprocessor based computer for experimental purposes (An Upgraded version of Apple][)
  1. 16 MHz Clock speed
  2. 32 kb SRAM
  3. 32 kb EEPROM
  4. 128 * 64 OLED display (using spi communication protocol interfacing)
  5. usb keyboard support (In feature)
  6. built in assembler and other utility softwares
- **Microasm: A Macro Assembler for MCS-51** - repository
  An advanced assembler for MCS-51 architecture to programming by supporting custom instructions beyond the standard ISA.

Research Experience

- **M.Tech Thesis: Energy efficient heterogeneous multi-core architecture for edge computing devices**

- **B.TECH Project: (High level Assembler for MCS-51 ISA)**

- **AMURoboclub** Aligarh, IN
  PG Representative *Jun 2022 - Jun 2023*
  - 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** Jaipur, IN
  Software Engineer *Jul 2018 - Feb 2019*
  - 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.

PUBLICATIONS

- : Saeed Akhtar, Rashid Ali,***Syeed Mohd Ameen***; Predicting the surface elastic parameters of soft solids using multi-output decision tree regressor. AIP Conf. Proc. 2 July 2024; 3168 (1): 020024. https://doi.org/10.1063/5.0219700
- : ***Syeed Mohd Ameen***, Yunus Kathat, Sunny Kr Shah, Kapil Kr Jangid, Ritika Sharma, "Implementation Graph Search Technique on A Navigation Line Follower Robot" IJSRED-V4I4P103 Page(s): 731-735

Skills

- **Languages**: C/C++ & python*(advance)*, Java/R *(Intermediate)*
- **Softwares** : Android Studio, Arduino IDE, Visual Studio
- **Framewroks/libraries** : Tensorflow, NumPy, Pandas, matplotlib, scikit-learn
- **Web** : HTML, CSS, JavaScript, Django, flask
- **Communication protocols** : I2C, SPI, UART, Zigbee, Bluetooth, 802.11, Thread, LoRa
- **Programmable devices** : AVR, PIC and ARM – based microcontrollers, EPS32, Raspberry pi RP2040
- **Database** : MongoDB, MySQL
- **Instruction set architecture** : x86, AVR, RISC-V, MCS-51, 6502 *(Assembly languages)*
- **EDA** : KiCad (PCB schematic and board layout designing)

PERSONAL INFORMATION

* Address - Ghaffar Manzil Colony, Jamia Nagar, Okhla, New Delhi, Delhi 110025
* Nationality - Indian
* Passport Number - **Y6711248** (Valid up to 2033)