

# Ali Arafat

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DOB: 9<sup>th</sup> January, 2000 | Address: New Delhi

## EDUCATION

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- SRM Institute of Science and Technology, Kattankulathur
- Bachelor of Technology in Computer Science Engineering, July 2023
- CGPA: 9.16
  
- Banyan Tree School, Lodhi Road, New Delhi
- CBSE Board class 12 2018 - 93%
- CBSE Board class 10 2016 - 9.8 CGPA

## EXPERIENCE

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Software Engineer Intern | Truminds Software Systems, Gurugram: Jan 2022 – Feb 2022

- Worked in telecom technology, SGSN node
- Socket Programming in C
- Microservices such as libmicrohttpd.h

Graduate Engineer Trainee (Python) | Absax Technologies pvt ltd. July 2023 (ongoing)

- **Biometrics:** Worked on Raspberry pi and fingerprint sensor and tested on AWS IoT Core and used flask. It's to restrict access to a forklift by only allowing certain people fingerprint to be able to turn engine on. As well as change access on every shift by deleting biometric information and putting in new.
- **Smart Andon System** (To increase factory productivity). It allows to display status of all stations in production line on a monitor live and indicate if there is any problem in any of the stations. It stores all the production data and abnormalities so an analysis can be done on station malfunctions and time taken on each station to know production line insights and improve efficiency. Worked on Raspberry pi, ESP32C3 ICs, Routers, Ubuntu and Kiosk Mode Browser and Flask. Wrote UDP socket in python to get signal from remote (ESP32C3). Wrote core python socket program to send remote signals to React application to a socket for live updates. Modified ubuntu system running on Raspberry pi to open browser in light Kiosk mode (full screen mode with background features on OS blocked). Created Flask application for interaction of backend of website with python to change remote configuration settings. Worked on micro python to program remote. Used multi-threading. Also wrote Flask APIs to write PLC register address to control factory lightings.

- **Energy Management System:** Worked on RS485 communication, pulling energy meter data and sending it to a cloud via API and Kepware for factory production efficiency. Used Python libraries such as minimalmodbus and pymodbus to pull data and queues to store data from which it is sent to cloud via api. Also tested sending data to Kepware by making raspberry pi into OPC UA server and Kepware as client. Connected it to 2G GSM SIM800L, and 4G SIM7600G-H for internet connectivity.

## PROJECTS

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Brain Tumor MRI Image Segmentation and Classification based on Deep Learning Techniques

- Segmentation and classification of brain tumour in mri images
- Published paper in 2023 2nd International Conference on Smart Technologies and Systems for Next Generation Computing (ICSTSN)  
<https://ieeexplore.ieee.org/document/10151504>

## Skills

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- C/C++, Python, micro-Python, DSA, Flask, IoT devices, Raspberry pi, Ubuntu, Linux, MS Excel/Power Point/Office

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