Muhammad Hamid Jamil

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Education

Comsats University Islamabad, Lahore campus Feb 2019 - Feb 2023
Bachelor of Computer Science

- **Courses:** OOP in C++, Compilers, Algorithms, Operating Systems, Data Structures, Web development, Artificial intelligence, Computer Graphics, Machine learning, Digital image processing.

Skills

Languages: C++, C, Python, Java, Ruby on rails and Java script
Technologies: IOT, RTOS, Jira, Git, IFTTT, Proteus, Blynk, Firebase, MIT app inventor

Experience

Visnext Software Solutions: Feb 2023 - Current

As an Associate Software Engineer at Visnext Software Solutions, I contributed to diverse projects like CareCloud, DonorBox, BTH, and Shopify based projects. Collaborating within cross-functional teams and meeting project timelines. These experiences sharpened my coding skills and problem-solving abilities, keeping me updated with the latest industry trends.

Projects

- **TTgo T-Call ESP32 IoT Integration** I undertook a project using the TTgo T-Call ESP32 module, uses multiple libraries to enable functionalities like making calls, sending SMS messages, and executing defined task on received messages and forwarding unrecognized messages to my designated number. This project showcased my IoT development and hardware integration skills, emphasizing proficiency in Arduino, GSM communication, and AT command handling.
- **FYP - Smart Healthcare Monitoring System** My Final Year Project focused on developing a wireless healthcare monitoring system using multiple ESP32 devices. These devices collected and transmitted patient vitals data, ensuring its accuracy and security. A corresponding mobile app displayed real-time vitals and issued critical health alerts when necessary.
- **ESP32-S3 BLE and HID Integration** This project facilitates seamless communication between an ESP32-S3 board and a connected BLE device. The ESP32-S3 serves as a BLE server, efficiently receiving commands from the connected device and executing corresponding actions. Furthermore, it functions as a Human Interface Device (HID), enabling it to emulate a keyboard and execute commands on CMD or RUN.
- **Watcher Bot** In this project I utilize an Arduino Nano and a range of sensors, including two ultrasonic sensors, a gyro sensor, a servo motor and a Bluetooth module. This project established an efficient monitoring system capable of detecting movement in its environment. The gyro sensor provided orientation data, and a Bluetooth module enabled wireless communication. I link this project with two of my semester Projects *Machine Learning* and *Digital Image processing*.
  1) **ML**: Module adjust its monitoring parameters by itself. (Used ML type: *Reinforcement learning*)
  2) **DIP**: Project uses OpenCV and Laptop camera to perform defined action on trained and untrained faces, for example it sign-out and turn off electrical appliances if know face not detected.