Asif Kingshuk

Hardware & Embedded Systems Engineer

I work across hardware, embedded firmware, and connected systems-bringing the device, its communication, and the software behind it together.

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EXPERIENCE

HiveTech AI | Current

Lead Hardware and Systems Engineer

- Hardware systems architecture, PCB development, and embedded platforms.
- Connected sensing, wireless networking, and device-to-cloud integration.
- Field deployment and technical leadership across hardware and systems engineering.

Celestial Tech Limited | 2023

Project Management Engineer

- Firmware and hardware systems for embedded and IoT product development.
- Over-the-air updates, supporting infrastructure, and real-time visualization.
- Engineering leadership across product development.

Datasoft Manufacturing & Assembly | 2020-2023

Engineer Level 1 / Lead Engineer / Project Engineer

- PCB development and embedded firmware across medical devices and IoT.
- Prototyping, mechanical design, and multidisciplinary product development.
- CNC, laser, and manufacturing work across the product development lifecycle.
- Technical leadership through progression from engineering to project responsibilities.

Axion Engineering Solutions | 2019-2020

Embedded Systems Engineer

- Embedded firmware, PCB design, and hardware systems development.
- Product development and mechanical prototyping.

ENGINEERING CAPABILITIES

Hardware: PCB & circuit design; Sensors & power; Prototyping & PCBA

Embedded: C / C++; ESP32 & RTOS; Drivers & OTA

Connectivity: LoRa / LoRaWAN; Wi-Fi & MQTT; SPI / I2C / UART

Edge: Embedded Linux; Raspberry Pi; Sensor processing

Cloud: APIs & databases; Telemetry pipelines; Device integration

Intelligence: Computer vision; Edge inference; Local AI experimentation

Asif Kingshuk

Building connected systems from PCB to cloud.

SELECTED PROJECTS

HiveTech connected beehive

Lead Hardware & Systems Engineer

Connected beehive monitoring spanning sensing, embedded systems, and device-to-cloud integration-part of my current hardware and systems engineering work.

Marine buoy control system

Project Lead

A remote marine monitoring and control system incorporating terrestrial and satellite communication for maritime applications.

DMA BVM Apollo

Project Lead

A BVM ventilator project bringing circuit design, embedded firmware, and mechanical integration together through rapid product development.

AroFosol / MoreCrop

Project Lead

A wireless agricultural soil-management platform bringing sensors, embedded firmware, and wireless communication together.

EDUCATION

University of Hartford | Completed 2025

Master of Science in Electrical and Computer Engineering

BRAC University | Completed 2021

Bachelor of Science in Computer Science and Engineering

Minor in Business Administration

RESEARCH

Enhancing Extended Reality (XR) by Using Mobile Devices Emphasizing Universal Usage

Undergraduate thesis | BRAC University | 2021

Read thesis in BRAC repository

Blockchain Implementation on Agricultural Product Supply Chain

Conference abstract | 3rd International Conference on Business and Management (ICBM 2021) | 2021

Read conference abstract

LEADERSHIP & TEACHING

Lead engineering and project-management responsibilities across hardware, embedded systems, and product development.

Robotics mentoring, technical training, and programming instruction, alongside involvement in technical clubs.