# Arfaz Khan Hijas Khan

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### **SUMMARY**

Results-driven Full-Stack Embedded Systems Developer with 2+ years of experience designing, developing, and deploying innovative web applications and integrating with hardware systems. Expertise in Python, Flask, React, JavaScript, Raspberry Pi and Arduino. Passion for leveraging technology for practical solutions.

### **EDUCATION**

### AWH Engineering College

**<u>B.Tech</u>** Electronics & Communication Engineering

### WORK EXPERIENCE

### Sign Factory

Full-Stack Developer (IoT/Embedded Systems)

• Designed and developed an end-to-end IoT customer feedback system using Raspberry Pi, a Flask backend, and a React frontend. This system enables real-time feedback collection, processing, and visualization.

 Collaborated closely with stakeholders to define requirements and deliver an intuitive user experience for feedback collection and analysis.

 Designed user-friendly interfaces with React and Bootstrap for effortless customer interaction and administrative data visualization, ensuring seamless feedback analysis.

### GTech µLearn

UI Designer Intern

• Collaborated on the redesign of the Mulearn website (v3), incorporating modern UI/UX principles and leading to a 30% improvement in user satisfaction metrics.

• Stayed current with design trends and worked effectively within a cross-functional team.

### The District Collectors Office

Software Admin Volunteer

• Led the development and launch of "Nammude Kozhikode," a citizen-centric initiative that resulted in a 57% increase in citizen engagement and a 33% boost in government service utilization.

 Rigorously tested the platform, resolved bugs, and provided comprehensive training to government officials, ensuring a successful digital transition.

• Managed confidential data with precision and crafted engaging digital content for platform promotion.

### **IEEE Malabar Hub, IEEE**

Web Development Volunteer

• Built a user-friendly website utilizing React and Tailwind CSS resulting in a 73% increase in site traffic.

• Led and collaborated a team of 5 volunteers and met tight deadlines. Delivered high-quality website with 95% positive feedback.

 Gained expertise in Git, debugging, and troubleshooting. Contributed to success of event through volunteering.

### Kozhikode, Kerala

Dec 2023 - Present

Kozhikode, Kerala

Jan 2021 - Jul 2021

Kozhikode, Kerala

Jun 2024 | Current GPA: 7.3

### Wayanad, Kerala

Nov 2022 - Dec 2022

## Dec 2023 – Feb 2024

Kozhikode, Kerala

### **District Tourism Promotion Council**

### **Operations Intern**

• Led an integral role in organizing Ponnonam'23, a prestigious three-day Onam Celebration, in collaboration with District Administration Kozhikode, DTPC, and Kerala Tourism.

• Guided and coordinated a 15-member team across 26 committees to ensure the seamless execution of the event. Managed communication with high-profile celebrities and artists, significantly enhancing the event's appeal.

• Oversaw event logistics, schedules, and resource coordination, reinforcing event management expertise.

### **PROJECT EXPERIENCE**

IoT/Embedded Systems

H.E.A.R.T.S. (Healthcare Enhanced by Augmented Reality and Raspberry Pi Tracking System)Ongoing Academic ProjectIoT/Embedded SystemsAug 2023 – Present

• Architecting comprehensive healthcare AR wearable leveraging embedded system, ML for patient identification and streamline crucial data visualization within medical environments.

- Integrating RetinaFace model within a Flask framework to achieve robust face detection in images and video data, forming the foundation of the patient identification system.
- Planned hardware integration featuring an FLCOS display, camera module, and Raspberry Pi housed within a wearable form factor for real-world deployment and hands-free access to information.
- Focused on the development of a system that prioritizes data accessibility, timely care, and error reduction in fast-paced healthcare environments.

### GestureConnect: Smart Glove for Inclusive Communication

Academic Project Mar 2023 – Jul 2023

• Developed an innovative smart glove system to bridge the communication gap for individuals with hearing impairments, facilitating sign language translation and promoting inclusivity.

- Designed and implemented hardware using [sensors used flex sensors, accelerometer and an Arduino UNO microcontroller to capture complex hand gestures accurately.
- Programmed custom gesture recognition algorithms in C++ to process sensor data and map gestures to sign language vocabulary simultaneously developed an Android application to receive Bluetooth data, translate sign language into text, and provide audible speech output, ensuring multi-modal accessibility.
- Focused on creating a cost-effective, portable solution to expand communication possibilities for users with hearing impairments

**Diverse Web Projects:** Designed and developed websites, webapps and e-commerce platforms leveraging HTML, CSS, JavaScript, React, Flask, and more.

Portfolio: https://akhkportfolio.netlify.app/

### ACHIEVEMENTS

- Received recognition from the District Collector for the success of "Ponnonam 2023" and contributions to "Nammude Kozhikode" in 2021.
- Young Innovators Program 4.0 District level Winner.
- Academic Excellence Award 2022.
- Outstanding Student Volunteer (Fresher) Award 2021.

### Kozhikode, Kerala Aug 2023 - Sep 2023