

Vijay Mohanram Iyer

PERSONAL INFORMATION

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PROFESSIONAL EXPERIENCE

1. Accenture India Pvt. Ltd.

Associate Software Engineer

February 2022 – April 2022

- Contributed to server maintenance of IBM Mainframe, ensuring system reliability and stability for critical business operations.

2. Accur Digitus

Web Developer

January 2020 – May 2020

- Developed responsive and scalable web applications using React.js, improving the user interface and enhancing user experience.
- Worked closely with the back-end team to implement RESTful APIs, ensuring seamless data integration and communication between front-end and back-end systems.

3. Access@KIT

Working student

March 2023 – May 2023

- Designed and implemented accessible user interfaces using Material-UI (MUI) to enhance web accessibility for users with disabilities.
- Worked with TTS model for text-to-speech conversion, improving digital content accessibility for visually impaired users on the web application.

4. TecoLab

Working Student

March 2023 – Present

- Built and optimized websites using Jekyll and WordPress, focusing on performance improvements and SEO optimization.
- Working on ML4Print project to analyze and classify printed documents based on printer-specific characteristics, paper type etc to identify fake documents.
- Working on a heat simulation project, utilizing machine learning to simulate the thermal behavior of liquids within industrial valves, enhancing predictive maintenance capabilities.

EDUCATION

M.Sc. in Electrical Engineering and Information Technology
Karlsruhe Institute of Technology

May 2022 – Present

Bachelor of Engineering in Electronics Engineering
Thakur College of Engineering and Technology, Mumbai, India
CGPA: 7/10

August 2017 – May 2021

PROJECTS

1. Real-Time Car Accident Alert System

Developed an embedded vehicle accident warning system to automatically detect crashes, send precise location data, and alert emergency services, family, and friends to improve response times.

2. Self-Driving Car using LIDAR

Generated high-resolution 3D environmental maps by analyzing laser pulse reflections, integrating this data with radar, camera inputs, and advanced machine learning algorithms for real-time obstacle detection and autonomous navigation.

3. CamCussion: Eye Tracking Software (Collaborated with Zeiss Innovation Hub)

Used OpenCV to analyze pupil dilation and saccadic eye movements in real time to track and assess eye behavior, contributing to accurate concussion diagnosis.

4. Attention Mechanism and Multi-ROI Artifact Recognition for DeepFake Detection Using rPPG (Collaborating with FZI) - Present

This Master-thesis aims to design and evaluate a deepfake-detection system based on rPPG signals. This approach leverages subtle color variations in the human face caused by blood flow, which are difficult for DeepFake algorithms to replicate.

SKILLS

- **Programming Languages:** Python, JavaScript, SQL, React.js, Node.js, HTML5, CSS3
- **Tools:** Git, Docker, Matlab

CERTIFICATIONS

- Full Stack Development – Unschool
- Capstone: Retrieving, Processing, and Visualizing Data with Python – University of Michigan (Coursera).
- Python Data Structures – University of Michigan (Coursera).
- Programming for Everybody – University of Michigan (Coursera).
- Published a paper on Real-time Car Accident Alert System in the International Conference on Trends in Electronics Communication (IC-TELCON-2021).
- Participated in the "Mind's Eye 2021" competition.