

SACHIT RAVIKUMAR

15 Gainsborough Square, Lockleaze, Bristol BS7 9XA

Email: sachit.exe@gmail.com | Mobile: +44 7393104748 | LinkedIn: [sachitravikumar](#) | [My Portfolio](#)

EDUCATION

MSc in Robotics, Distinction | University of Bristol | UK | 2023-2024

- Modules included: Robotics Systems, Robotics Fundamentals, Machine Vision, Intro to AI, Assistive Robotics, Human-Robot Interaction, Bio-Inspired AI.

BEng in Computer Science and Engineering, First Class Distinction | Anna University | IN | 2019-2023

- Modules included: Machine Learning, Artificial Intelligence, Data Analytics, DBMS, Probability & Statistics, Linear Algebra and Applied Calculus, Software Engineering Concept

PROJECTS

Autonomous Rendezvous, Docking, and Berthing in Space

- Developed an autonomous docking system with advanced **control system** and **sensors** in a **Gazebo-ROS** simulation, utilizing **Linux**, for space missions, ensuring precise alignment and docking
- Implemented a safety system and optimized trajectory planning algorithms, achieving **97%** accuracy using **Python** and **C++**, enhancing reliability in autonomous operations

Apple Counting in Orchards

- Developed **computer vision** algorithms using **Python**, **OpenCV**, and **TensorFlow** to automate apple counting, enhancing yield estimation and harvesting efficiency
- Applied **CNNs**, **R-CNNs** and **YOLO** to achieve accurate fruit detection resulting in **82%** accuracy by collaborating with a team to integrate advanced camera systems for comprehensive data acquisition

Maze Solving Robot with Path-Planning

- Developed a maze-solving differential drive robot simulation in **ROS2** using **Docker**, featuring computer vision-based localization, path planning, and full integration with **Gazebo**, **RViz**, and **OpenCV**
- Implemented and evaluated path planning algorithms including **A***, **Dijkstra**, and **DFS** to enable efficient autonomous navigation through complex maze environments

Other Skills: C#, .NET, Machine Learning, AI, MATLAB, Flask, SQL, React, JavaScript, Java, Git, VS Code, Blockchain

PROFESSIONAL EXPERIENCE

Front End Developer - Intern | TCR Innovation | January 2022 – March 2022 | Mumbai, India(Remote)

- Designed and developed **responsive websites** with user-centric **UI**, boosting user clicks by **30%**.
- Gained experience in intuitive interface design, focusing on **usability** - key for developing control and monitoring platforms

AR Developer - Intern | XRBit | April 2021 – April 2022 | Chennai, India

- Implemented Augmented reality-based web applications depicting the historical and cultural heritage of India using **Three.js**, reaching **2000** visitors on average
- Developed an application based on **AR** using **Unity**, **C#** and integrated it with **Android Studio**, benefiting the education of special needs individuals across three autistic schools

Graphic Designer and Video Editor | Freelancing | March 2019 – October 2023

- Designed social media content for clients on Instagram and YouTube, promoting economics education over **1M** viewers, and boosting followers by **40%** for a mental well-being campaign
- Developed expertise in **content creation** and **data analysis**, which aligns with creating instructional materials and diagnostics interfaces

EXTRACURRICULAR ACTIVITIES

- Led the design and launch of **Augmented Reality**-based educational application impacting at least **25 specially abled students**, and showcased prototype to All-India Council for Technical Education
- Presented paper titled "Metaverse Induced E-Commerce Website" at **IConIC 2K23** (6th International Conference on Intelligent Computing) and secured **publication** in **Scopus-indexed journal**
- Coordinated and organized a team of 12 within Commoners, a **social service** community, aimed at providing assistance to orphanages and child-care homes