

Vivek Radhakrishnan

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Eligible to Work for Any Employer in the United States

SUMMARY

Accomplished Senior Robotics Engineer with over a decade of experience in designing, developing, and deploying advanced robotics systems for real-world applications. Specialized in perception and planning for autonomous systems, with a proven track record of delivering innovative solutions that enhance operational efficiency and performance. Strong background in UAVs and robotics research, adept in both hardware and software integration. Passionate about leveraging cutting-edge robotics technology to transform industries and improve lives.

EDUCATION

M.Sc. in Robotics

New York University, New York
2021 - 2023

B.Sc. in Electrical Engineering



Birla Institute of Technology and Science, Dubai
2010 - 2014

PATENTS

A system for charging a battery in an aircraft

- Utility, No. 18/467,202 (Pending, 2023)
- Provisional, No. 63/375,638 (Granted, 2022)

LINKS

 website
 linkedin

SKILLS

- C++, Python
- PCB, CAD
- Robotics system design
- Autonomous systems development
- Cross-functional team collaboration
- Analytical problem solving
- Startup environment adaptability

EXPERIENCE

ZEROFLAI - Co-Founder & CEO

07/23 - Present

- Designed and implemented autonomous charging systems for UAVs, enhancing mission continuity without human intervention.
- Led a team of engineers and researchers to develop state-of-the-art robotics solutions, focusing on real-world applications.

Agile Robotics and Perception Lab - Researcher

09/21 - 09/23

- Designed and implemented perception and planning algorithms, contributing to advancements in UAV performance and autonomy.
- Introduced a perception framework grounded in foundation models for universal object detection and tracking, ensuring continuous target visibility in challenging conditions.
- Developed a model-free controller for resilient quadrotor visual tracking.

Technology Innovation Institute - Senior Researcher

07/20 - 08/23

- Developed and optimized algorithms for autonomous UAVs, including perception, path planning, and control systems.
- Collaborated with cross-functional teams to integrate advanced robotics solutions, resulting in improved operational performance.

Algorhythmia - Systems Integration Engineer

10/18 - 06/20

- Implemented cutting-edge control, state estimation, and perception subsystems for autonomous aerial platforms.
- Enhanced UAV performance through innovative algorithm development and system integration.

BUT nv. - Lead Hardware Engineer

05/15 - 09/18

- Led hardware engineering projects, focusing on the development and deployment of interactive media and robotics solutions.

The Assembly - In House Engineer

10/14 - 05/15

- Delivered workshops and built innovative projects in robotics and IoT, fostering hands-on learning and practical application.

Etisalat - UAV Engineer

08/14 - 10/14

- Developed UAV solutions for the Smart City Project, contributing to winning the Drones for Good Award.

PEER-REVIEWED PUBLICATIONS

Unifying Foundation Models with Quadrotor Control for Visual Tracking Beyond Object Categories

IEEE International Conference on Robotics and Automation, 2024

Directed Graph Topology Preservation in Multi-Robot Systems with Limited Field of View Using Control Barrier Functions

IEEE Access, 2023

AutoCharge: Autonomous Charging for Perpetual Quadrotor Missions

IEEE International Conference on Robotics and Automation, 2023

Vision-based Relative Detection and Tracking for Teams of Micro Aerial Vehicles

IEEE/RSJ International Conference on Intelligent Robots and Systems, 2022

Challenges in Vision-based Drones Navigation

IEEE/RSJ International Conference on Intelligent Robots and Systems, 2019

Autonomous Unmanned Aerial Vehicle for Reconnaissance based on Robotic Operating System

Third Symposium on Indoor Flight Issues, 2013