

Alwyn Mathew

Computer Vision Researcher

alwynm.github.io

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Kerala, India

Last updated on January 22, 2022

Work Experience

Postdoctoral Research Assistant (Medical Robotics)

[University of Dundee](#)

Dec 2021–present

Scotland, United Kingdom

Education

Ph.D. in Computer Vision (3D Computer Vision)

[Indian Institute of Technology \(IIT\) Patna](#)

Aug 2021

Patna, India

Masters in Technology (Image Processing)

[College of Engineering Karunagappally](#)

May 2016

Kerala, India

Bachelors in Technology (Information Technology)

[Tamilnadu College of Engineering](#)

April 2012

Coimbatore, India

Research Experience

Medical Robotics

[University of Dundee](#)

2021 – present

Scotland, United Kingdom

- Autonomous **Medical Robot**
- 3D reconstruction** with monocular camera

3D Computer Vision for Autonomous Vehicles

[Indian Institute of Technology \(IIT\) Patna](#)

2016 – 2021

Patna, India

- Dense Depth Estimation** from single calibrated/uncalibrated camera.
- Vulnerabilities** of monocular depth estimators against adversaries.

Recent Research Publications

- [Mathew, A.](#), Jolly, MJ. and Mathew, J., Improved Residential Energy Management System Using Priority Double Deep Q-learning, Sustainable Cities and Society, (2021).
- [Mathew, A.](#), Patra, A., and Mathew, J., Monocular Depth Estimators Vulnerabilities and Attacks, IEEE Intelligent Systems, (2020).
- [Mathew, A.](#), Roy, A., and Mathew, J., Intelligent Residential Energy Management System Using Deep Reinforcement Learning, IEEE Systems Journal, (2020).
- [Mathew, A.](#), and Mathew, J., Monocular Depth Estimation with SPN loss, Image and Vision Computing, (2020).

for full list [click here](#)

Areas of Interest

- 3D Computer Vision
- Adversarial Machine Learning
- Medical Robotics
- Reinforcement Learning
- Demand Side Management

Skills

Python

C

C++

C#

Pytorch

TensorFlow

OpenCV

Jetson TX2

Raspberry Pi

Awards

IoT Grand Challenge Runner-up

[Indian Institute of Technology \(IIT\) Patna](#)

2016

Bosch DNA Challenge Finalist

[Bosch India](#)

2017

Patna Ideathon Top 35

[Government of Bihar](#)

2018

Scholarships

Senior Research Fellowship

[Ministry of Human Resource Development, Government of India](#)

2018 - 2021

Junior Research Fellowship

[Ministry of Human Resource Development, Government of India](#)

2016 - 2018

Post Graduate Fellowship

[Institute of Human Resources Development, Government of Kerala](#)

2014 - 2016