Alwyn Mathew

Computer Vision Researcher

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Work Experience

Postdoctoral Research Assistant (SoftEn)
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 soft **medical robot**
- **3D reconstruction** from high FOV 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

- Bander, B., **Mathew, A.**, Magerand, L., Trucco, E., and Manfredi, L., Real-Time Lumen Detection for Autonomous Colonoscopy, *MICCAI 2022 ISGIE Workshop*, 2022.
- **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.

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