

# Keith Rodrigues

Address: Hounslow TW59AU    Mobile: 07459228046  
Email: keithjose13@gmail.com    Web: [krodri95.github.io](https://github.com/krodri95)

---

## PROFESSIONAL SUMMARY

Over 4 years of experience in developing cutting-edge computer vision algorithms for advanced driver assistance systems (ADAS). Proficient in software development, image analysis, pattern recognition, and deploying on-device deep learning solutions. Demonstrated expertise in solving complex image processing challenges and contributing to innovative, high-impact projects.

## KEY SKILLS

- |                    |                                    |                   |
|--------------------|------------------------------------|-------------------|
| • Machine Learning | • PyTorch, Tensorflow, Caffe, ONNX | • Communication   |
| • Computer Vision  | • Python, C++                      | • Adaptability    |
| • OpenCV           | • Linux, Windows                   | • Team work       |
| • ROS/ROS2         | • GIT, Docker                      | • Problem solving |

## WORK EXPERIENCE

### Visteon Corporation

Senior Data Scientist | Apr 2023 – Aug 2023, Goa, India

#### Vehicle Surround View Monitor System

- Led the high-precision calibration of the surround view system in the test vehicle.
- Successfully developed seamless bird's eye and 3D views using fisheye cameras.
- Designed a method using equirectangular projections to provide undistorted front and rear corner views of the vehicle.
- Enhanced on-device system performance by optimizing the OpenGL-based rendering pipeline, resulting in reduced latency.
- Executed simulation-based testing to identify corner cases and determine optimal camera configurations.
- Familiar with common camera models, calibration, and image enhancement techniques.
- Automated the intrinsic and extrinsic camera calibration using Python and OpenCV.

**This role was instrumental in securing production projects with two leading OEMs, driving revenue growth, and enhancing market presence.**

### Visteon Corporation

Embedded Software Engineer | Jul 2021 – Mar 2023, Goa, India

#### Visteon's level 2/2+ ADAS features

- Liaised with teams from Texas Instruments and Samsung to import and evaluate deep learning vision models on their SoCs. Reported and helped resolve 20+ issues with their import and inference tools.
- Developed C++ based applications in ROS2 for end-to-end real-time deployment of the quantized models on embedded hardware.
- Formulated a probabilistic occupancy grid for vehicle path planning using semantic segmentation.

- Assisted the validation and perception teams through SIL and HIL testing, actively resolving defects.
- Facilitated seamless software integration for customer demos, consistently delivering ahead of schedule.
- Conducted peer reviews for code changes.

## **Visteon Corporation**

Software Engineer | Jul 2018 – Jun 2021, Goa, India

- Developed and finetuned robust convolutional neural networks for traffic sign/light recognition, lane detection using semantic segmentation, and object detection using the SSD and YOLO frameworks.
- Evaluated the model performance against state-of-the-art models and conducted an extensive literature review.
- Generated object detection and classification datasets for vehicle occupant monitoring system to detect number of occupants and driver emotions.
- Utilized CVAT and LabelMe for data annotation and implemented augmentation techniques to improve the detection accuracy by over 10% in challenging scenarios.
- Proficient in managing and processing large scale datasets to train and validate computer vision models.
- Performed requirement analysis, authored test cases, and logged defects.

## **ADDITIONAL ROLES**

---

### **IPM group**

Stadium Steward (part-time) | Mar 2024 – May 2024, Sheffield, UK

- Ensured the safety and security of spectators, demonstrating strong problem-solving skills and attention to detail.
- Monitored crowd behavior and addressed disturbances, showcasing effective communication.
- Verified tickets and spectator credentials to control access to restricted areas.

## **EDUCATION**

---

### **The University of Sheffield**

Master of Science in Robotics | Sep 2023 – Sep 2024, Sheffield, UK

Project: Explainable deep learning for brain tumor diagnosis – Utilizing xAI techniques for visual explainability of the model predictions.

Relevant modules: Deep learning, Machine vision, Mobile robotics and autonomous systems.

### **Goa University**

Bachelor of Engineering in Electrical and Electronics | Jul 2014 – May 2018, Goa, India

GPA: 8.01/10

Group project: Arduino based hand-gesture control of television.

✓ Recipient of the Fomento Resources Gold Medal Award for being the top performer.