Deval Shah

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EDUCATION

- **Carnegie Mellon University - School of Computer Science** — Pittsburgh, PA
  Master of Science in Robotic Systems Development — *May 2021*

- **Birla Institute of Technology and Science, Pilani** — Hyderabad, India
  Bachelor of Engineering in Electrical and Electronics — *Jul 2016*

COURSEWORK

- Computer Vision, Deep Reinforcement Learning, Introduction to Deep Learning, Robot Localization and Mapping, Manipulation Estimation and Control, Introduction to Robotics Business, Systems Engineering and Management for Robotics

PROJECTS

- **Simulating Traffic Agents in Realistic Scenarios** — Pittsburgh, PA
  Ridecell and Carnegie Mellon University | Simulation Lead | Rotating Project Manager — *Sep 2019 - Present*
  - Developing upon CARLA simulator (Unreal Engine 4) to support with smart actors (cars, pedestrians), where their behavior is more realistic and interactive based on real-world data.

- **[EduSense](#) | Practical Classroom Sensing at Scale** — Pittsburgh, PA
  HCII, Carnegie Mellon University | Research Assistant | Summer Research Assistant — *Jan 2020 - Sep 2020*
  - Created 3D digital-twin of classrooms (instrumentation free) to provide 6DOF Gaze for students and the teacher in real-time.

PROFESSIONAL EXPERIENCE

- **Aitech Robotics and Automation Pte Ltd** — Singapore
  Robotics Engineer — *Apr 2019 - Jul 2019*
  - Developed prototype of fully autonomous forklift (tricycle drive) using off-the-shelf packages like Google's Cartographer, in Robot Operating System(ROS) leading to a successful deal with the customer.

- **GreyOrange Robotics Pte Ltd** — Gurugram, India
  Embedded Engineer — *Sep 2016 - Feb 2019*
  - Worked on marker-less navigation for a fleet of automatic guided vehicle (AGV) in shared space with humans.
  - Worked extensively on autonomous navigation algorithms to achieve sub-centimeter accuracies in AGV.
  - Developed algorithm for a low-cost 3D-dimensioning system with 5 mm accuracy.
  - Created a complete software-in-loop test automation framework for AGVs on Gazebo with ROS to reduce hardware dependency for testing.

- **Google Summer of Code Student with RTEMS** — Remote
  Student Developer — *May 2016 - Aug 2016*
  - Added USB and Ethernet support to Raspberry Pi Board for a Real-Time Executive for Multiprocessor Systems (RTEMS) and developed Human Interface Device drivers.

- **Tonbo Imaging** — Bangalore, India
  Intern — *Jul 2015 - Dec 2015*
  - Interfaced thermal camera system, laser sensor, and OLED Display with a media processor and developed user-firmware for thermal imaging monocular camera *Foxhound*.

- **MIT-Media Lab with Srujana Innovation Centre, L.V. Prasad Eye Hospital** — Hyderabad, India
  Intern — *Dec 2014 - March 2015*
  - Developed a low cost wearable and modular headset platform called *Pupil+* for eye diagnosis which secured 3rd prize in BioAsia Healthcare Devthon.

SKILLS

- **Programming Languages**: C, C++, Python, Bash Scripting, MATLab
- **Framework and Tools**: Git, OpenCV, Robot Operating System (ROS), Gazebo, RTOS, TensorFlow, PyTorch