

Abhinav Dadhich

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EDUCATION

NARA INSTITUTE OF SCIENCE AND TECHNOLOGY

M.ENG. IN INFORMATION SCIENCE
Oct 2015 | Nara, Japan
Average Grade: A; Cum GPA: N/A

INDIAN INSTITUTE OF TECHNOLOGY, JODHPUR

B.TECH. IN ELECTRICAL ENGINEERING
June 2013 | Jodhpur, India
Cum. GPA: 7.43 / 10.0

LINKS

Github:// [ResByte](#)
LinkedIn:// [adadhich](#)
Quora:// [Abhinav-Dadhich](#)

COURSEWORK

GRADUATE

Robotics
Computer Vision
Foundations of Artificial Intelligence
Ambient Intelligence
Computational Neuroscience
Computer Graphics

UNDERGRADUATE

Data Structure and Algorithms
Introduction to Programming
Signal Processing
Digital Electronics and
Microprocessor Technology
Control Systems

SKILLS

PROGRAMMING

Python • C++
Familiar:
Robotics Operating System(Package) •
Gazebo • Matplotlib • Boost • Eigen •
Point Cloud Library • OpenCV •
Numpy • Scikit-Sklearn • \LaTeX
Robots:
TurtleBot • Robovie MR2 •
Quadcopter

EXPERIENCE

KYUSHU INSTITUTE OF TECHNOLOGY | RESEARCH STUDENT, SHIBATA LAB

Supervisor : Dr. Tomohiro Shibata | August 2014 - August 2015 | KitaKyushu, Japan

- Problem: Robust mapping for mobile robot navigation in changing environments.
- Aim: Maintain an updated map for robots working for long periods such as weeks.
- Method: Proposed a novel inference approach on occupancy grids to model different dynamic changes in map.
- Implemented inference model for occupancy grids using Explicit-state Duration HMM and tested it on Long term dataset.

RAPYUTA ROBOTICS | ROBOT NAVIGATION INTERN

Oct 2015 - Present | Tokyo, Japan

- Developed Slam backend for Dense Visual Odometry based mapping.
- Fine tuned parameters to perform cloud based mapping.
- Extensively tested on real world environment.

PUBLICATION

Abhinav Dadhich, Nishanth Koganti, and Tomohiro Shibata. "Modeling occupancy grids using EDHMM for dynamic environments.", In Proceedings of the Conference on Advances In Robotics 2015, p. 60. ACM, 2015.

PROJECTS

MATHEMATICAL INFORMATICS LAB | MASTERS THESIS

Oct 2013 - Sept 2015 | Ikoma, Japan

- Supervisor : Dr. Kazushi Ikeda, Dr. Tomohiro Shibata.
- Problem: Robot navigation in dynamic environments is challenging.
- Solution: Maintain robust map for navigation by incorporating observed changes.
- Over Long periods of working of robots, a large sequential map data is generated. Inferring the hidden states in such sequential data. Working towards Publication

IIT JODHPUR ROBOTICS LAB | UNDERGRADUATE RESEARCH

Oct 2012 - Feb 2013 | Jodhpur, India

- Developed a Video Tracking system for a general object.
- Implemented Lucas-Kanade method of sparse optical flow in tracking and used SIFT algorithm to detect objects.
- Python is used as working environment with OpenCV libraries. Controller for the system is Beagleboard with ubuntu 11.10.

IIT JODHPUR ROBOTICS LAB | UNDERGRADUATE RESEARCH

May 2011 - Dec 2011 | Jodhpur, India

Developed Scilab Simulation of Quadcopter Model. Implemented control parameters on an Indigenous made Quadcopter with successful flights.