

ABHISHEK PATIL

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<http://patilnabhi.github.io/portfolio>

EDUCATION

- 1) **Northwestern University (NU), Evanston, IL** (Sep 2015 – Present)
M.S. in Robotics Engineering (Expected graduation – Dec 2016),
 - Cumulative GPA: 3.96/4.0
- 2) **National University of Singapore (NUS), Singapore** (Aug 2010 – Jun 2014)
B.E. in Mechanical Engineering (Honors),
 - Specialized in Product Design
- 3) **University of Western Ontario (UWO), Canada** (Jan 2013 – May 2013)
Student Exchange Program,
 - Collaborated and presented on two projects with students from UWO, which allowed me to gain deeper understanding of the Canadian culture and greater confidence in working in a diverse setting
- 4) **Catholic Junior College (CJC), Singapore** (Jan 2006 – Dec 2007)
GCE A Level Certificate,
 - Awarded outstanding CCA Achievement Award

WORK EXPERIENCE

- 1) **DynaOptics Pte. Ltd. – Singapore** (May 2014 – Aug 2015)
Camera Module Engineer,
 - An innovative team of 10 developing a unique optical zoom lens technology for mobile devices
 - Designed and produced 2D and 3D drawings of a camera module and customized jigs and fixtures
 - Interacted closely with suppliers and potential customers
 - Supported in image testing set-up, calibration and data collection of imaging tests
 - Selected by the CEO to address a crowd of over 50 engineering students at a local University for a career talk
 - Applied Design for Manufacturing (DFM) and Design for Assembly (DFA) methods using 3D softwares such as CETOL 6σ, Abaqus FEA and Solidworks 2014

PROJECTS EXPERIENCE

- 1) **TurtleBot SLAM, Northwestern University** (Jan 2016 – Mar 2016)
 - Implemented ROS, RGB-D SLAM, OpenCV and machine learning to program TurtleBot robot to navigate it in an unknown environment using hand-gestures
 - Applied path planning algorithms such as Dijkstra's algorithm coupled with ROS' Dynamic Window Approach (DWA) path planner to optimize navigation of TurtleBot
- 2) **Baxter Pick 'n' Place, Northwestern University** (Nov 2015 – Dec 2015)
 - Collaborated with teammates on a Robotic Operating System (ROS) project to program Baxter robot to carry out pick and place of different sized objects
 - Applied motion planning, obstacle modelling, robotic manipulation and image processing algorithms using ROS tools such as MoveIt!, Rviz and OpenCV
- 3) **Innoventure Competition, National University of Singapore** (Aug 2013 – Mar 2014)
 - Led a team of three students to propose a solution and business plan and develop a prototype for a real-life problem by Jurong Town Corporation (JTC), securing top position out of six participating groups

4) Robotics Club, Catholic Junior College (CJC)

Vice-President,

(Aug 2006 – Jul 2007)

- Led teams in 4 robotics competitions, namely, Singapore Robotic Games 2007, 17th Inter-School Micromouse Competition, Singapore Robo Grand Prix (F1 Masters Super League) and Singapore Robo Grand Prix (Temasek Challenge), and our teams won three of the competitions and came in third in the other
- Participated in Singapore Robo Grand Prix competition and won Merit Award trophies in both the F1 Masters Super League and TP Challenge JC/ITE categories

LEADERSHIP & VOLUNTEER EXPERIENCE

1) NUS Entrepreneurship Society, NES

Member,

(Jan 2012 – May 2012)

- Organized two entrepreneurship sessions which attracted a turnout of about 300 students

2) NUS Mechanical Engineering (ME) Camp Committee

Member,

(Jan 2012 – May 2012)

- Brainstormed, proposed and coordinated team-building activities for new students

3) National Service (NS), Singapore

Combat Medic,

(Apr 2008 – Feb 2010)

- Developed leadership, team-building skills and cross-cultural bonding
- Collaborated with Taiwanese and Thailand army personnel to attend to more than 30 patients per night during a medical cover attachment

4) Chingay Parade 2007, Singapore

Volunteer,

(Nov 2006 – Feb 2007)

- Interacted with students from various schools across Singapore, from different cultures
- Learned that even just one person can make a difference when it comes to working in groups to organize a huge event

5) Sentosa Outing with Youths (Mercy Relief), Singapore

Organizer,

(Aug 2006 – Nov 2006)

- Organized recreational activities for less fortunate children on Sentosa Island
- Learned the importance of equality and sustainability in today's society of rapid advancements

TECHNICAL SKILLS

- Proficient in ROS, Python, C, Embedded Systems/Mechatronics, PCB design, OpenCV, Git, GitHub, Markdown, Mathematica, CSS, Jekyll, HTML, SolidWorks, CETOL 6σ, Rhinoceros 3D, Grasshopper, MS Office Suite, Windows, Linux
- Familiar with C++, MATLAB, JavaScript, Ruby, Abaqus, Adobe Dreamweaver/Flash/Photoshop

OTHER COMPETENCIES

- Proficient in English, Marathi and Hindi languages
- Enjoy outdoor sports such as badminton, swimming, cycling and table-tennis