

Jihoon Lee

Profile:

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Links: [Github](#)
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Education:

Brown University - Providence RI, USA May 2012
M.S. Computer Science
University of California, Irvine - Irvine CA, USA June 2010
Bren School of Information and Computer Science. B.S Computer Science
De Anza/Foothill College - Cupertino CA, USA
Kookmin University - Seoul Korea

Work Experience:

Senior Robotics Engineer - Bear Robotics(Seoul, Korea) Jan.2018 - Aug.2018

Pennybot - Autonomous restaurant servent

Responsible for most of robotics related software component development including configuration management system, sensor calibration, multi robot management, and navigation in restaurant space.

Robot Software Engineer - Magazino GmbH(Munich, Germany) Mar.2016 - Dec.2017

TORU - Autonomous mobile manipulator for warehouse

Robot Software Developer

Developed various components for robust robot operation including localization in warehouse environment, optimized controller for shelf surfing, system diagnostics framework.

Research Engineer - Yujin Robot Co. Ltd(Seoul, Korea) Aug. 2012 - Sep 2015

Robotics in Concert(a.k.a ROCON)

Developed multi robot system as practical as possible in order to provide practical solutions to multi-robot-device-tablet problems.

- **Core Developer:** designed and developed architecture of multi robot operation framework, appable robot system, and human robot interaction framework from the project start(Aug. 2012). Maintains tools and libraries in large scale software framework.

Links :

- Project Wiki : <http://www.robotconcert.org>
- ROS Wiki : <http://wiki.ros.org/rocon>
- Video : https://www.youtube.com/watch?v=C_Yok36WRs4

TurtleBot2

a standard robotics research platform that helps users to enter robotics research

- **Software Developer:** developed and integrated internal software stack and user interaction framework.

- **Open Source Maintainer:** maintained public wiki and tutorials, reviewed pull requests in github, and managed queries from community. maintained ROS packages. Presented TurtleBot2 at ROSCON 2013.

Links :

- Wiki : <http://wiki.ros.org/Robots/TurtleBot>
- Github : <https://github.com/turtlebot>

Research Assistant - Brown University(Providence RI, USA)

Jan. 2012 - Aug.2012

PR2 Projects

Developed system architecture, task based control loop, and object detection and recognition logic in various mini PR2 projects as a participant. Continued web enabled robotics projects.

Web enabled robotics

Developed Robot Web Tools, an open source library, for robot web visualization and interaction. Developed remote robot experiment house using processing and python.

- ROSProcessingjs: <https://www.youtube.com/watch?v=X1JROfapySY>
- PR2 Commander : <https://www.youtube.com/watch?v=573v2guH8N4>
- PR2 Block Builder : <https://www.youtube.com/watch?v=BW9hK-eP5GO>

Teaching Assistant - Brown University(Providence RI, USA)

Sep. 2011 - Dec.

2011

- **CS-148 Introduction to Autonomous Robotics**

Software Engineer Intern - Bosch Research(Palo Alto CA, USA)

May. 2011 - Aug.2011

PR2 Remote Lab

a web-centered remote laboratory comprising of a PR2 robot and the hardware/software infrastructure necessary for making it available for public Internet use. Developed 3D based front-end robot interaction tools using WebGL, and maintained a web-based 3D robot visualization environment.

- Clearing a table with HTML5 : <https://www.youtube.com/watch?v=dWG7em5cwWo>
- Autonomous Drink Serving : <https://youtu.be/z36xkUILtQE>

Student Researcher - University of California, Irvine(Irvine CA, USA)

Jun 2009 - Sep.2009

Fault Tolerant Distributed System

Identified all cases of possible machine failures, implemented machine failure handler and data migration algorithm across multi-machines in C language. Implemented the supporting library, which preserves the application level failures in Java-like language.

- Awarded SURP(Summer Undergraduate Research Program) fellowship/grant
- Poster Presentation in UCI Undergraduate Research Symposium

Student Tutor - De Anza College(Cupertino CA, USA)

Sep 2007 - Jun 2008

- **Calculus, C/C++, Java**

Relevant Experiences:

Robot Web Tools Maintainer

Sep 2012 - Present

Maintain Robot Web Tools as open source library. Developed core libraries and setup robot web tools group. Reviews and accept pull requests from community. releases up-to-date ros packages.

- Website : <http://www.robotwebtools.org>

ROS(Robot Operating System) Consultant

Sep 2012 - Aug 2015

Provides consulting services, tutorials, and talks to various research groups and communities to help them understanding how to use ROS and ROS ecosystem. Topics included ROS as Open source community, ROS tutorial for beginners, ROS overview, and more advanced topics.

- Presented to various open/closed robotics groups including Korea Aerospace Research Institute, Korea Institute of Industrial Technology, Kookmin University, Naver Corporation.

Publication:

Toris, R.*, Kammerl, J., Lu, D., Lee, J., Jenkins, C., Osentoski, S., Wills, M., Chernova, S. (2015) Robot Web Tools: Efficient Messaging for Cloud Robotics. In Proceedings of IROS 2015: IEEE/RSJ International Conference on Intelligent Robots and Systems. Hamburg, Germany.

Patents:

Shin, K., Park, S., Kim, H., Stonier, D., **Lee, J.**, (2015) Application program providing apparatus and the operating method. In Korea Patent 1015402050000, Filed 2013.05.13, Issued 2015.07.31

Skills:

- **C/C++** - algorithms, library development, 2d/3d data manipulation.
- **Open Source** - developed, contributed, and maintained various open source projects
- **Python** - algorithms, QT UI development, and framework glue
- **Javascript/Nodejs** - 3D visualization with WebGL, simple webapp, server development using javascript, and nodejs.
- **Other Knowledgeable** : Matlab, Java, Issue Tracking & CI, Linux, CMake and etc
- **Language**
 - Korean - Native
 - English - Fluent. Bachelor's and Master's in english speaking country. Working with international company team.(4+ years)