SEUNGKOOK YUN

Senior Software Engineer
SRI International
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EDUCATION

Massachusetts Institute of Technology — Cambridge, MA
PhD, Computer Science and Artificial Intelligence Laboratory — June 2010

Massachusetts Institute of Technology — Cambridge, MA
M.S., Computer Science and Artificial Intelligence Laboratory *GPA 4.9/5.0* — February 2009
Courses: Under-actuated Robotics, Advanced Algorithm, Advances in Computer Vision, Machine Learning, Computer Networks, Statistical Learning Theory and Applications, Probabilistic Systems Analysis

Korea Advanced Institute of Science and Technology (KAIST) — Taejon, Korea
M.S., Mechanical Engineering *GPA 3.9/4.3* — February 2000

Korea Advanced Institute of Science and Technology (KAIST) — Taejon, Korea
B.S., Mechanical Engineering *GPA 3.9/4.3 (Major GPA: 4.1/4.3)* — February 1998

SKILLS

Software: C/C++ (proficient), JAVA (proficient), Python (familiar), MATLAB, CATIA, SolidWorks
Hardware: DSP, RS-232, CAN
Languages: fluent in English, fluent in Korean, familiar with Japanese

EXPERIENCE

SRI International — Menlo Park, CA
Senior Software Engineer — 2013-current

Honda Research Institute U.S. — Mountain View, CA
Scientist — 2010-2013

- Working on algorithms for emergency plans of humanoid robots such as reactive stepping and fall control.
- Developing S/W interface to connect the controller to simulators and robot hardware such as NAO and ASIMO.

Distributed Robotics Lab, Massachusetts Institute of Technology — Cambridge, MA
Research Assistant — 2006-2010

- Led the coordinated construction project where a team of robots with assembly and delivery tasks cooperate to build a target structure. Designed the algorithms for dividing the total workload equally to each robot and for robust construction.
- Proposed the algorithm to optimally cover a graph in a distributed way. Proved convergence and stability of the algorithm.
- Devised the distributed matching algorithm between two set of nodes on a graph. Applied the algorithm to optimally relocate a group of the truss climbing robots in a distributed fashion. Used JAVA threads to secure the distributed system.
- Extended the distributed matching algorithm to assemble the multiple robots with bars into a chained structure that can reconfigure itself. Successfully implemented the self-assembly by the truss climbing robots.

Honda Research Institute U.S. — Mountain View, CA
Researcher (Internship) — 2008

- Created the world first algorithm for safe fall of a humanoid. Tested on the dynamic model of ASIMO.

Intelligent Robotics Research Center, Korea Institute of Science and Technology — Seoul, Korea
Research Scientist — 2003-2006

- Implemented a virtual tour of Korean heritages by wearing a tactile glove and a haptic device in the 3D display.
- Integrated S/W components of computer vision, navigation and manipulation on RT Linux. Successfully demonstrated drink service to the several presidents of the world in the Asia Pacific Economic Cooperation (APEC) 2005.

R&D Center, KIA Motors — Kwangju, Korea
Research Engineer — 2000-2002

- Modeled 3D components for the power-train system. Trained professionally for mechanical design by CAD.

AWARDS AND HONORS

The Samsung Scholarship for PhD — 2005
The bronze award in Korea Olympiad in Computer programming — 1993
The gold award in Kyunggi state Olympiad in Computer programming — 1993

PUBLICATION: **6 Journal/magazine papers, 21 Conference papers, 15 Patents**