Sunwoo Kim – Résumé

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Research Interest

My research interest aims to control simulated characters, consequently bringing the result to the real world. In the end, I expect to build interaction between the real-world such as humans to humans, robots to robots, humans to robots or vice versa. I utilise tools in computer graphics, deep learning, robotics and computer vision to reach this dream.

Education

Sep 2019- Present PhD student in Computer Science - Seoul National University
Advisor: Jehee Lee(Until Feb.2022), Jinwook Seo(From Feb.2022)
Co-advisor: Sehoon Ha (Unofficial)

Feb 2015- Feb 2019 BSc in Creative IT Engineering - Pohang University of Science and Technology
Magna cumme laude (GPA: 3.88)

Lab Internship

Feb 2019 - Aug 2019 Movement Research Lab
Trajectory optimization
Dexterous hand research

Nov 2017 - July 2018 Design Intelligence Lab
Human-Computer-Space interaction, Sensor communication and sensing
Interactive space design, Hazardous environment alarm system

June 2016 - Dec 2016 Sport Engineering Lab
Sensor control research
First person view sports broadcasting in Pyongchang with KBS

Publication

"Human Motion Control of Quadrupedal Robots using Deep Reinforcement Learning"
Sunwoo Kim, Maksim Sorokin, Jehee Lee, Sehoon Ha
Robotics: Science and Systems (RSS), 2022 (Accepted)
Project Site Supplementary video. arXiv.

Software Engineering Skills

- **Programming Languages**

  C, C++
  Python
  Coq

- **Libraries**

  OpenGL, OpenCV
  Bullet, DartSim, Raisim- physics simulation
  Pytorch, Tensorflow, OpenAI gym

English Skills

- OPIc English - Advanced Low level

Teaching

Mar 2021 - Aug 2021 Teaching Assistant
Head TA of *Core Computing: Thinking with Computers*

Mar 2018 - Aug 2018 Undergraduate Tutor
Head Tutor of *Digital system and Micro-processor*

Awards

2018 Creative IT Convergence Korea Grand prize - Ministry of Science and ICT, Korea
Improved Color Palette Extraction from Pictures (presentation 4:12, awarded 1:38:00)

2017 Grand prize - Pohang University of Science and Technology
Creative Design III - Improved Color Palette Extraction from Pictures

2016 Grand prize - Pohang University of Science and Technology
Creative Design II - Artistic Video Transfer using Deep Learning