

# Kyuwon (Andy) Choi

[andychoi35@gmail.com](mailto:andychoi35@gmail.com), [www.akwchoi.info](http://www.akwchoi.info), 515 E. 86<sup>th</sup> Street Apt #502, New York, NY 10028

## EDUCATION

---

**University of California, Los Angeles, Los Angeles, CA** June 2021  
M.S. in Mechanical Engineering / Robotics, GPA: 3.70

**Cornell University, Ithaca, NY** May 2020  
B.S. in Mechanical Engineering, Cum Laude, GPA: 3.55 (Major GPA: 3.63)

## WORK EXPERIENCE

---

**AgileSoDA, Seoul, Korea** July 2021 – Present

*Reinforcement Learning Research Engineer*

- Developing an AI Robotics product: RoboSoDA
  - Government-funded project on RL-based Palletizing Application using a Doosan Robot
  - Participated in NIPS Competition on Home Robot
  - Pick n Place with a real robot (Trossen Robotics - WX250 LoCoBot)
- Developing a B2B reinforcement learning MLOps platform: BakingSoDA
  - Sold multiple copies with customer education and customization
- Developing an AI-based semiconductor design optimization solution: ChipNSoDA
  - Collaborated with a semiconductor design house in Korea to actualize the solution

**AgileSoDA, Seoul, Korea** Jun 2020 – Sep 2020

*AI (Reinforcement Learning) Algorithm Intern*

- Placed 3<sup>rd</sup> in Block toy manufacturing process optimization AI contest hosted by Dacon and LG
- Developed RL algorithm for ejector pin's location during TV manufacturing process with LG Electronics

**CORNELL University, Ithaca, NY** Aug 2019 – Dec 2019

*Teaching Assistant (Mechatronics: MAE 3780)*

## RESEARCH EXPERIENCE

---

**Autonomous Systems/Verifiable Robotics Research Group, Cornell University, Ithaca, NY** Sep 2018 – Dec 2019

*Undergraduate Research Assistant (Advisors: Professors Hadas Kress-Gazit and Mark Campbell)*

- Developed skills (e.g. picking, placing, and driving) for KUKA youBot using Robot Operating System (ROS)
- Implemented a particle filter in order to localize the Duckiebot with AprilTags using Python
- Constructed a 3D map of a hallway with ZED Stereo Camera, LiDAR, and JACKAL.
- Integrated JACKAL odometry, LiDAR and ZED Stereo Camera RGBD data in RVIZ using RTAB-MAP

**Roar Lab, Columbia University, New York, NY** Jun 2018 – Aug 2018

*Research Intern (Advisor: Professor Sunil Agrawal)*

- Performed literature reviews on neck braces

## PUBLICATIONS

---

- Heuristic Algorithm-based Action Masking Reinforcement Learning (HAAM-RL) with Ensemble Inference Method, *Arxiv Preprint, March 21 2024*
- Reinforcement Learning Based Pallet Loading Algorithm and its Application to a Real Manipulator System *Ubiquitous Robots 2023, Honolulu, HI, USA*
- Reinforcement Learning Based Palletizing Methodology to Respond to Diverse Logistics Environments *KRoC 2023, PyeongChang, Korea*

## TECHNICAL SKILLS

---

- Reinforcement Learning, Python (PyTorch, TensorFlow), MATLAB, Robot Operating System (ROS)