Hyung-gun **Chi**

PHD STUDENT · SOFTWARE ENGINEER

585 Purdue Mall ME3171, West Lafayette, IN 47907

(415)203-8543 | chi45@purdue.edu | hyung-gun.me | stnoah1 | hyung-gun | Hyung-gun Chi

Research Interests

My research interests lie at the intersection of Computer Vision and Robotics, focusing on 3D Geometric Deep Learning and Temporal Action Anaylsis. In this area, I apply Machine/Deep Learning algorithms for Augmented/Virtual Reality and Smart Factory.

Education

Purdue University — *West Lafayette, IN, USA*

PHD IN ELECTRICAL AND COMPUTER ENGINEERING — *Aug. 2018 - PRESENT*

- Advisor: Professor Karthik Ramani

Yonsei University — *Seoul, South Korea*

BS IN MECHANICAL ENGINEERING — *Mar. 2010 - Feb. 2017*

- Advisor: Professor Soo-Hong Lee
- 2011-2013, 2-year military service

Skills

Language	Python, Matlab, C/C++, SQL, JavaScript, HTML, CSS, PHP
Machine/Deep Learning	PyTorch, TensorFlow, Keras
Web Programming	MYSQL/mongoDB, Flask/Node.js
CAD Tool	Creo Parametric, SolidWorks, AutoCAD
ETC	GAZEBO, ROS

Publications and Patents

Conference Proceedings

- [**C2**] **H. G. Chi**, S. Kim, X. Hu, Q. Huang, and Karthik Ramani. A Large-scale Mechanical Components Benchmark for Deep Neural Networks. In proceedings of the 16th *European Conference on Computer Vision (ECCV)*, 2020, accepted.
- [**C1**] S. Kim, **H. G. Chi**, and Karthik Ramani. First-Person View Hand Segmentation of Multi-Modal Hand Activity Video Dataset. In proceedings of the 31st *British Machine Vision Conference (BMVC)*, 2020, accepted.

Journal Papers

- [**J2**] S. Kim, **H. G. Chi** and Karthik Ramani. Object synthesis by learning part geometry with surface and volumetric representations. In *Computer-Aided Design*, in revision.
- [**J1**] S. Kim, N. Winovich, **H. G. Chi**, G. Lin, and K. Ramani. Latent transformations neural network for object view synthesis. In *The Visual Computer*, pp. 1-15, 2019
- [**J1**] H. T. Hwang, **H. G. Chi**, N. K. Kang, H. B. Kong and Soo-Hong Lee. An Evaluation Methodology for 3D Deep Neural Network using Visualization in 3D Data Classification. In *Journal of Mechanical Science and Technology (JMST)*, 33(3), pp. 1333-1339, 2019

Patents

- [**P1**][**PDF**] **H. G. Chi**. *Computer Input Automation System*. KR Patent (2017): 10-1745330.

Working Experience

Software Engineer and CEO — *Seoul, South Korea*

NEIL LAB CORPORATION — *Sep. 2016 - Dec. 2017*

- Found and lead a start-up company as a CEO and Software Engineer. The company was funded $ 30,000 by the SeongNam Industry Promotion Agency.
- Develop an office automation system specifically for automating office tasks such as sending an e-mail or issuing receipts.
- Designed a back-end system and database for customer web-service which automatically scrap and integrate customer's financial and personal data. (*Relevant patent: [**P1**]*)

Mechanic and Squad leader — *Inje, South Korea*

REPUBLIC OF KOREA ARMY — *Apr. 2011 – Jan. 2013*

- Maintain military weapons and equipment including firearms and vehicles.
- Lead a squad as a squad leader; honored as a distinguished soldier.