Hyung-gun **Chi**

MASTER STUDENT

108 S. River Road, West Lafayette, IN, 47906

☎ 415-203-8543 | ✉ chi45@purdue.edu | stnoah1 | hyung-gun

Education

Purdue University	*West Lafayette, IN, USA*
MASTER OF SCIENCE IN MECHANICAL ENGINEERING	*Aug. 2018 - PRESENT*

- Advisor: Prof. Karthik Ramani, Donald W.Feddersen Professor of Mechanical Engineering

Yonsei University	*Seoul, South Korea*
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING	*Mar. 2010 - Feb. 2017*

- 2011–2013, 2-year military service

Research Experience

CT GAN	*West Lafayette, IN*
STUDENT RESEARCHER	*Aug. 2018 - Dec. 2018*

- Implemented a military cooperation system which is web based real time messenger in Scala on Lift.
- Improved functionality on military command and control system for incident response with Java Servlet.
- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.

IGN	*West Lafayette, IN*
STUDENT RESEARCHER, C-DESIGN LAB	*Aug. 2018 - Dec. 2018*

- Developed in Cocos2d-x an action puzzle game(Dragon Buster) targeting U.S. market. Implemented API server which is communicating with game client and In-App Store, along with two other team members who wrote the game logic, designed game graphics.
- Won the 2nd prize in final evaluation.

VIPO	*West Lafayette, IN*
STUDENT RESEARCHER, C-DESIGN LAB	*Aug. 2018 - Dec. 2018*

- Researched means of retrieving a corresponding video based on image contents using image similarity algorithm.
- Implemented prototype that users can obtain torrent magnet links of corresponding video relevant to an image on web site.

Wearable Glove	*West Lafayette, IN*
STUDENT RESEARCHER, C-DESIGN LAB	*Aug. 2018 - Dec. 2018*

- Performed research memory management strategies of OS and implemented in Python an interactive simulator for Linux kernel memory management.

3D Object Classification Model Evaluation	*Seoul, South Korea*
RESEARCH ASSISTANT, KNOWLEDGE-BASED DESIGN LAB	*Feb. 2016 – Jul. 2017*

- Proposed a method which evaluate 3D neural network models using the visualization based on the decomposition of a model's predictions to apply the models in the field of mechanical design and manufacturing. (Relevant publication: [C3])

Module Structure Platform for Surgical Workflow Management	*Seoul, South Korea*
RESEARCH ASSISTANT, KNOWLEDGE-BASED DESIGN LAB	*Feb – Jul. 2016*

- Developed a web-based platform for integrated surgical information, to optimize surgical procedures and reduce medical loss caused by communication errors and lack of information.

Skills

Programming	Python, C/C++, JavaScript, HTML, CSS, PHP, Matlab, SQL
Frameworks	ROS, TensorFlow, Keras, Caffe
Software	Pro-E, SolidWorks, AutoCAD, HyperWorks
Languages	Korean, English

Publications

Journals

- H. T. Hwang, S. H. Lee, H. G. Chi, N. K. Kang, and H. B. Kong. "An Evaluation Methodology for 3D Deep Neural Network using Visualization in 3D Data Classification" (2018) Journal of Mechanical Science and Technology, accepted

Conferences

- S. Kim, H. G. Chi, E. Li and Krthik Ramani. "Interventional Generative Network for 3D Objects via Learning Surface Configuration and Part Relation" (2019) ICLR
- S. Kim, Nick, H. G. Chi and and Krthik Ramani. "Latent Transformations for View Synethesis with Cconditional Convolutional Networks" (2019) CVPR, submitted
- Luis, Xun, H. G. Chi and Krthik Ramani. "ControllAR: Design and Fabrication of a Universal Parametric Low-Profile Hand Wearable for Augmented Reality Interactions" (2019) International conference on Ubiquitous computing , submitted

Patents

- H. G. Chi. "Computer Input Automation System" KR Patent (2017): 10-1745330

Working Experience

NEIL LAB Corporation *Seoul, South Korea*

CO-FOUNDER & SYSTEM DEVELOPER *Sep. 2016 - Aug. 2017*
- Automated an office platform for a tax office to enhance the office's work efficiency and customer service
- Developed a RPA system, using Python, to increase the efficiency of working in the office
- Led and managed the company with more than 20 employees as the CEO and selected as a startup funded by the Seongnam Industry Promotion Agency (fund amount: $ 30,000)

Republic of Korea Army *Inje, South Korea*

SERGEANT & SQUAD LEADER *Apr. 2011 – Jan. 2013*
- In charge of the maintenance of firearms, wireless devices, vehicles, and NBC equipment
- Led a squad as the squad leader; honored as a distinguished soldier

Extracurricular Activity

Habitat for Humanity Korea Campus Chapter *South Korea*

MEMBER & PRESIDENT *Mar. 2010 – Aug. 2016*
- Constructed houses for the homeless and worked on improving poor residential environments, during 26 and 7 occasions, respectively
- Led and managed the volunteer group for a year; received the first honor from 2014 Yonsei Club Evaluation

Korea Food for the Hungry International - campus volunteer group *South Korea*

MEMBER *Apr. 2013 – Nov. 2013*
- Taught and mentored preschool children and elementary school students at Seoul Children's Center

Honors & Awards

2016	**KISTI (Korea Institute of Science and Technology Information) President's Award,** Edison Challenge – Computer Aided Design Section	*Seoul, South Korea*
2016	**CDE (Society for Computational Design and Engineering) President's Award,** CDE Challenge – Computational Design and Engineering Tools Section	*Daejeon, South Korea*