

HYUN JUN CHOI

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EDUCATION

University of Southern California, Viterbi School of Engineering – Los Angeles, CA **December 2018**
Master of Science in Data Informatics

Relevant courses include but are not limited to: Machine Learning, Foundations and Applications of Data Mining, Foundations of Data Management, Data Informatics Professional Practicum, Probability and Statistics for Data Science, Information Visualization, and Directed Research

Inha University, College of Information Technology & Engineering – Incheon, South Korea **August 2016**
Bachelor of Science, Computer Science

Relevant courses include but are not limited to: Data Structures, Algorithms, Mathematical Statistics 1 and 2, Multivariate Statistics and Lab, Methods of Statistical Analysis, and Design Object-Oriented Development

RESEARCH INTERESTS

- Deep Learning, Recommender Systems based on Deep Learning, Data Mining, Machine Learning, Neural Network Hyperparameter Optimization, and Computer Vision.

HONORS AND AWARDS

- 1st semester: Honor student **2016**
- 2nd semester: Honor student **2012**

RESEARCH EXPERIENCE

Research Assistant

University of Southern California – Los Angeles, CA

January 2018 – December 2018

Neural Network

- Conducted research on the generalization properties of Neural Networks (NNs).
- Investigated ways to improve the generalizability of NNs across more than one hundred real-world datasets, using the *Keras* library in *Python*.

Research Assistant

Image Informatics Lab, Inha University – Incheon, South Korea

January 2013 – April 2014

Computer Vision

- Participated in the research project titled “Classification of Synthetic and Real Image using Pattern Features Research”.
- Evaluated the performance of the proposed image classification algorithm based on Support Vector Machine (SVM) using *Matlab*.
- Myeong Hui Ha, Hyun Jun Choi, Min Kook Choi, Sang Chul Lee, Classification of Synthetic and Real Images Using Pattern Features (2014) [[English](#), [Korean](#)]

Human-Computer Interaction

- Participated in the research project entitled “Development of MIMO HCI SW Technology for Active Intentional Cognition and Response of Multiple Users”.
- Developed software (in *Java*) to estimate a user’s concentration levels using SVM and a computer mouse click and movement data.

POSTER PRESENTATION

HM LEE, **HJ CHOI**, MK CHOI, and SC LEE. *Classification of Synthetic and Real Images Using Pattern Features*. Paper presented at Image Processing and Image Understanding Conference (2014) [[English](#), [Korean](#)]

PROJECTS

Visualization on datasets from the Correlates of Wars

INF 554 Information Visualization

University of Southern California – Los Angeles, CA

August 2018 – December 2018

- Visualized military expenditures of top-10 spenders, information concerning militarized interstate disputes, wars, and international trade using datasets provided by the Correlates of Wars. A graphic demonstration was prepared of the relationship between the number of countries at war and the total amount of international trade.
- Implemented the responsive and interactive charts with *D3.js*.
- Designed and developed a web application on *Node.js*, and front-end interface using *Angular* written in *JavaScript* and *Bootstrap* CSS framework.
- Hyun Jun Choi, Shiv, Information Visualization on Wars and WorldTrade Datasets (2018) [[Report](#), [GitHub](#), [Website](#)]

Liver Transplant Data Analysis

INF 560 Data Informatics Professional Practicum

University of Southern California – Los Angeles, CA

January 2018 – May 2018

- Analyzed a dataset provided by the Department of Surgery at USC's Keck School of Medicine so as to identify features associated with graft survival after orthotopic liver transplantation (OLT).
- Utilized statistical methods, NNs, and SVM to predict graft survival after OLT using pre-transplant features.
- Implemented NNs and SVM with the *Scikit-learn* and *Keras* library in *Python*.
- Hyun Jun Choi, Yujia Deng, Ana Farzindar Predict Graft Survival after OLT using Pre-Transplant Features using machine learning and statistical method (2018) [[Report](#)]

Movie Recommender System

INF 553 Foundations and Applications of Data Mining

University of Southern California – Los Angeles, CA

March 2018 – March 2018

- Implemented a movie recommender system with matrix factorization approach and so on with *Python* and *Apache Spark*. [[GitHub](#)]

Android Application Development

INF 551 Foundations of Data Management

University of Southern California – Los Angeles, CA

January 2017 – May 2017

- Developed an Android application (in *Java*) for the USC community, which includes students, faculty, and alumni, to recommend good resources in the USC campus and share their extraordinary experiences.
- Used *Firebase* as the database to store all the data and resources.
- Hyun Jun Choi, Wanjin Li, Taoran Ju, Project Final Report (2017) [[Report](#), [GitHub](#)]

WORK EXPERIENCE

Sergeant, 7th Ammunition Depot, Korean Army, Chungju, South Korea

- Guarded military areas

SKILLS & INTERESTS

Programming Languages: Python, C/C++, DynamoDB, Java, JavaScript, SQL, NoSQL, MATLAB, MongoDB, HTML/CSS, JavaScript

Visualization tools: D3.js, Processing.js, P5.js, Three.js, WebGL, OpenGL

Web Framework and Cloud Computing: Apache Hadoop, Apache Spark, Apache Cassandra, Apache Hive, AWS (EC2)

Software: Microsoft Office, Microsoft Excel

Markup Languages: Latex, XML

Programming Environments: MATLAB/Simulink

Collaboration Tools: Git

Statistical Analysis Software: R, Statistical Analysis System (SAS)

LEADERSHIP & SERVICE

Public Relations Team Leader, TEDxInhaU **2012**

Inha University – Incheon, South Korea

- Explained the purpose of TEDxInhaU to the school and to private companies to obtain the necessary funding to hold a TedxInhaU conference.
- Advertised TEDxInhaU conference.

Teacher, Yonghyeon-dong Community Service Center, Incheon, Korea **2012**

- Taught programming languages and mathematics to underprivileged middle and high school students who could not afford private tutoring fees

Club President, Inha University Travel Club **2008–2009**

Inha University – Incheon, South Korea

CERTIFICATION

HIPPA

Los Angeles, CA

January 2017 – Current

ORGANIZATION MEMBERSHIP

Member, AAAI

January 2017 – Current

January 2017 – Current

Member, SoCal K Group

Los Angeles, CA

January 2018 – Current

- SoCal K-Group is a group of arts and technology experts in the IT field. This group has seminars, studies, hacker tones, and discussion activities on the Information Technology field.

Member, USC Korean Graduate Student Association (KSGA)

University of Southern California – Los Angeles, CA

January 2017 – December 2018

LANGUAGES

Korean (Native Speaker), English (Fluent)