Youngjin Heo

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Education

Apr.2017 **MS, Biostatistics**, *University of Michigan*, Ann Arbor, MI.

Aug.2014 **MS, Mathematical Science**, *Korea Advanced Institute of Science and Technology*, Daejeon, South Korea.

Jan.2012 **BS, Mathematical Science**, *Korea Advanced Institute of Science and Technology*, Daejeon, South Korea, Minor in Financial Engineering Program.

Work Experiences

Jun–Aug.2016 **Data Scientist Intern**, *University of Michigan Transportation Research Institute*, Ann Arbor, MI.

- Extracted hard-braking events in Michigan using a 5.2 TB dataset in Python using pandas, numpy and multiprocessing modules, and identified the duration and frequency of the events in order to avoid potential car damage.

Jan–Jul.2015 **Statistician**, *Clinical Trial Center in Chonbuk National Hospital*, Jeonju, South Korea.

- Maintained data analysis pipeline for Phase I clinical trial and analyzed the trial datasets for writing 'statistical analysis plan (SAP)' and 'clinical study report (CSR)' using SAS, SQL and R in order to help pharmaceutical companies to make a decision on equivalence of two medicines or treatments.

Sep.2013 – Feb.2014 **Statistical Programmer**, *University of California San Francisco*, San Francisco, CA.

- Implemented supervised machine learning techniques in correlated structured data in R with glmnet package to recognize informative patterns, select significant variables, and do classification for deriving clinically meaningful information from the data of patients with Alzheimer or Parkinson disease.

Academic Experiences

Jan–Apr.2017 **Statistical Modeling Projects**, *Statistical Investigation course*, University of Michigan.

- Modeled and analyzed real world datasets using logistic regression, linear mixed model, survival analysis and/or machine learning algorithms in R in order to figure out risk factors for disease-related outcomes or build predictive models for developing a disease.

Jan–Apr.2017 **Signal Classification with Machine Learning Projects**, *Signal Processing and Machine Learning course*, University of Michigan.

- Extracted features from signals and classified signals by using decision tree, Support Vector Machine (SVM), and K-Nearest Neighbor (KNN), which resulted in improving accuracy of classification.
- Applied Convolutional Neural Network (CNN) for biomedical image segmentation in order to classify cancers using Theano in Python.

Sep–Dec.2016 **Block-wise Gibbs Sampling Project**, *Statistical Computing course*, University of Michigan.

- Implemented the block-wise Gibbs Sampling in C++ for generating samples from a large dataset and increased the sampling speed by 60 percent through modifying covariance computation algorithm so as to identify risk factors of the dataset.

Sep.2016 – Apr.2017 **Teaching Assistant**, *Statistical Inference & Probability and Distribution Theory*, University of Michigan.

- Assisted 80 graduate students by holding office hours to guide students to complete their assignments and understand materials in-depth, and graded their homeworks and exams.

Technical Skills & Language

Programming Python, SQL, R, SAS, C++, Matlab, Linux, Hadoop, GitHub, Tableau.

Language English (Fluent in written and oral), Korean (Native).

Honor & Awards

Korean Government Fellowship *Sep. 2015 – Apr.2017*

Outstanding Teaching Assistant Award *May. 2013, 2014*