Minseong Bae | Curriculum Vitae

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Education

Busan Science High School **Busan, South Korea**
2018-2020

Korea University **Seoul, South Korea**
College of Informatics, Dept. of Computer Science & Engineering *2021-Current*

- (Plan) Double Major : Dept. of Mathematics
- GPA : 4.50/4.50 (2021 Spring - 2021 Fall)

Interests

Computer Science

- Machine Learning / Deep Learning : Computer Vision, Natural Language Processing
- Data Science
- Problem Solving

Mathematics

- Linear Algebra & Abstract Algebra
- Discrete Mathematics & Graph Theory
- Number Theory
- Cryptography

Projects

Epitope prediction in allergens using PPI prediction model *2019*

- Team project with 3 students
- Data Preprocessing with Stanford SNAP Yeast PPI data
- Model based on scikit-learn, Tensorflow, Keras
- Paper uploaded on Github
- Awarded 2019 R&E Academic Presentation Contest
- Awarded 14th KSCY Excellent Youth Scholars Award in Computer Engineering Session

Transformation of Non-Linear Activation Functions to Linear by Taylor Approximation *2020*

- Approximation of non-Linear activation functions with Taylor Approximation and application to neural networks
- Accuracy is maintained or even enhanced with approximated functions
- Full code and documents on Github

Prediciton of Successful Shooting and Devising Connectivity Index of Team Network in Basketball *2021*

- Project for GEST151 Data Science and Artificial Intelligence
- Predicting whether shooting is successful or not with NBA shooting data using machine learning
- Visualization of team network and devising connectivity index of team with NBA game pass data
- Full code on Github

Awards

2018 I&D Academic Presentation Award - 3rd *2018*

- Development of Remotely Operated Underwater Robot of Collaborative Robot for Ship Salvage

2019 R&E Academic Presentation Award - 3rd *2019*
- Epitope prediction in allergens using PPI prediction model

14th KSCY Excellent Youth Scholars Award *2019*
- In Computer Engineering Session
- Epitope prediction in allergens using PPI prediction model

36th Seoul National University Data Mining Camp - 2nd *2019*

5th Super Computing Youth Camp by KISTI & UNIST - 2nd *2019*

Dean's Award *2021 Spring*

President's Award *2021 Fall*

Courseworks

Math for Computer Science 1 (Prof. Seungryong Kim) *2021*
- Basic Linear Algebra
- #1 in Total Coursework

Data Structure *2021*
- Data Structure and Algorithms in C++

Algorithms *2021*
- Learning Basic Algorithms and Algorithm Designing Methods with CLRS
- #1 in Total Coursework

Skills

- **Programming Languages:** Python, C, C++
- **Frameworks & Tools:** Tensorflow, Keras, scikit-learn, Linux
- **Languages:** Native in Korean, Conversational in English

Extracurricular Activities

Leader for Korea University Computer Science Academy *2021 Sep-Current*
- Various Studies and Projects about Computer Science
- Also Working as Instructor for Linear Algebra / Probability & Statistics studies

Member for ALPS *2021-Current*
- Studying Problem Solving and Algorithms

Completed Yonsei University-Naver Cloud Data Science Education Course *2021*
- All course with Python, Basic theory and exercise with code
- Basic ML Algorithms : Linear Regression, Decision Tree, Logistic Regression
- Artificial Neural Networks & Deep Learning(CNN, RNN, Q-learning), Random Forest, SVM
- Text Mining & NLP