Nayeong Kim

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Education

MAR 2016 - Present
KAIST, Bachelor
Major in Computer Science, Second Major in Mathematical Science

MAR 2012 - FEB 2015
Korea Science Academy of KAIST
High School

Experience

DEC 2020 - Present
Moloco, Seoul, Korea
Software Engineering Intern

JAN 2020 - FEB 2020
Google, Seoul, Korea
Software Engineering STEP Intern
Developed a virtual testing library for MediaRouter in Androidx as part of the Android Media APIs team.

Research

SEP 2020 - Present
Individual Study, KAIST
with Professor Ji Oon Lee
Studied random matrices and their applications in community detection.

MAR 2020 - AUG 2020
Individual Study, KAIST
Visual Computing Lab, with Professor Min H. Kim
Developed and implemented an auto-focusing algorithm for the cameras used in the lab's light stage equipment. Solved a light position calibration problem for the light source and mirror ball in the lab's light stage equipment by extending modern techniques for light source estimation.

JAN 2019 - JUL 2019
Undergraduate Research Program, KAIST
Users & Information Lab, with Professor Alice Oh
Crawled Blue House(Office of the President of South Korea) petitions and bills of the National Assembly of South Korea using their public data APIs. Analyzed and visualized the data using pandas and matplotlib.

Projects

SEP 2020 - DEC 2020
App for Cat Face Recognition
Group Project for Introduction to Artificial Intelligence
Developed an app for cat face recognition. Used OpenCV for data preprocessing (face detection and crop) and fine-tuned a pretrained ResNet model for cat face recognition. Served the model on a Flask server for the final app. Individual contribution: Preprocessing data and implementing the server.

SEP 2020 - AUG 2020
Coursework
Individual Project for Mathematical Foundations for Artificial Intelligence

- Classification of Eye Blinking using Logistic Regression and Linear SVM
- Comparison of Linear Regressions Using Different Regularizations: Ridge, Lasso
- Blob Clustering Using Mean Shift Clustering
- Comparison of NMF and PCA

Teaching

MAR 2019 - Present
Programming Teacher, KAIST Software Education Center
Taught Python programming to a class of 23 high school students at Daedeok High School.

MAR 2019 - JUN 2019
Tutor, KAIST's Global Institute for Talented Education
Teaching assistant for a Python course attended by 45 high school students.

JUL 2018 - DEC 2018
KB Hope Mentoring Program
Taught mathematics and English twice a week to two middle school students from low-income families.

Awards and Scholarships

Aug 2019 - Present
Samsung Research Scholarship : 10 million KRW/year (9,000 USD/year)

JUL 2019 - JUN 2020
Google's Women Techmakers Scholarship : 2019 APAC WTM Scholar[1]

Courses Taken

Computer Science
- Discrete Mathematics
- Data Structure
- Introduction to Algorithms
- System Programming
- Introduction to Computer Graphics
- Computer Graphics
- Introduction to Computer Vision
- Programming Language
- Computer Organization
- Introduction to Artificial Intelligence
- Theory of Programming Languages
- Intelligent Robot Design and Programming

Mathematical Science
- Introduction to Linear Algebra
- Linear Algebra
- Probability and Statistics
- Analysis 1, 2
- Complex Variables 1
- Elementary Probability Theory
- Combinatorial Topology
- Modern Algebra 1
- Mathematical Statistics
- Lebesgue Integral Theory
- Mathematical Foundations for Artificial Intelligence

Skills

Languages
- Python
- Java
- C++
- Scala
- Matlab
- LaTeX

Frameworks/Libraries
- Pytorch
- Flask
- Pandas
- Matplotlib
- Scikit-Learn
- Numpy/Scipy
- OpenGL
- OpenCV

[1] Formerly the Google Anita Borg Memorial Scholarship Program.