Joowon Kim

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EDUCATION

University of Illinois at Urbana-Champaign *May 2021*
Bachelor of Science, Computer Science and Economics *GPA: 3.4/4.0*
Minor, Mathematics

SKILLS

Skills: Python, C++, Javascript, Statistics, Numerical Analysis, Machine Learning, Neural Networks, Full Stack Development
Technologies: PyTorch, Pandas, NumPy, Django, PostgreSQL, Linux, AWS, Git, Jupyter Notebook
Coursework: Data Structures and Algorithms, Regression Analysis, Statistics, Computer Architecture, Data Science Programming, Applied Linear Algebra, Artificial Intelligence, Algorithms and Models of Computation, Applied Econometrics

EXPERIENCE

State Farm
Data Science Intern *August 2019 – December 2019*

- Optimized clustering algorithms in Jupyter Notebook, using Python and the sklearn library
- Explored various methods to optimize runtime for >18GB files and ~400 different vector combinations
- Congregated different claims processes based on agglomerative clustering, vector distance, shingling
- Solo-built entire LDA-simulation pipeline for data science team to utilize, improving future research efficiency

State Farm
Software Engineering Intern *May 2019 – August 2019*

- Constructed corporate data analytics portal using Javascript, Python, Django, PostgreSQL, JSON, and pandas
- Developed analysis tool in software, increasing the efficiency of data search functionality by 100%
- Redesigned information storage in PostgreSQL database to improve analysis for ~1000 data-layered maps
- 2nd biggest contributor to the application, to be used by 6,000+ State Farm executives to make corporate decisions

CS 196 at UIUC
Director of Project Management *August 2018 – December 2019*

- Directing all 35 project managers for the 210 computer science students in the CS 196 Honors course
- Managing as scrum master using skills such as Python, Java, machine learning and front-end development
- Installed new and rigid grading system and hiring/interview methods, while keeping an effective 1:7 student-PM ratio

PROJECTS

NBA Progress Prediction *Present*

- Utilizing PyTorch, keras, pandas, NumPy, and basketball API to predict the best performers for the 2020 NBA Season
- Implementing linear-regression neural network using training data from past years to identify player progression
- Exploring ways to integrate non-linear regression within deep neural network to acquire more accurate predictions

AWS Email Bot *July 2019*

- Built a Python script using libraries such as schedule and smtplib to develop a subscription-type email bot
- Running the script continuously for 100 days by implementing the Amazon Web Services' EC2 instance
- Implemented structural methods supporting constant runtime, making user data processing easier and more efficient

BriovaRx Patient Center Application *February 2019*

- Placed Top 3 for UnitedHealth Group's Challenge at HackIllinois 2019
- Designed using Apache Cordova and Javascript, with separate p2p data channel video chat demo with WebRTC
- A proof of concept to be potentially used for self-diagnosis of 1000s of chronically diseased patients.

MISCELLANEOUS

Placed 1st Nationally for Academic Games League of America in On-Sets event
Placed 3rd Nationally for Academic Games League of America in Equations event
Love playing basketball or golf, losing in fantasy sports, going to social events, and gaming