

# Joowon Kim

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## EDUCATION

### University of Illinois at Urbana-Champaign

*Bachelor of Science, Computer Science and Economics*

May 2021

GPA: 3.54/4.0

**Skills:** Data Science, Web Development, Software Engineering, Python, C++, Javascript, Java, Git, PostgreSQL, Django

**Coursework:** Data Structures and Algorithms, Discrete Structures, Regression Analysis, Statistics, Differential Equations

**Current Coursework:** Computer Architecture, Prog Data Science, Applied Linear Algebra, Inter Microeconomic Theory

## EXPERIENCE

### State Farm

*Data Science Intern (Part-Time)*

*August 2019 – Present*

- Optimizing clustering algorithms in Jupyter Notebook, using Python and the scikit-learn and ProcessMining libraries
- Exploring various methods to optimize runtime for >18GB files and ~400 different vector combinations
- Congregating different claims processes based on agglomerative clustering, vector distance, shingling
- Learning new industry-standard techniques such as Latent Dirichlet Allocation and Bayesian modeling

### 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
- 2<sup>nd</sup> 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 – Present*

- 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

### 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 data structures 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.

### Cryptocurrency Arbitrage Web-Application

*January 2018 – August 2018*

- Implemented ccxt Python library to simulate trades in current cryptocurrency market through an arbitrage algorithm
- Designed web-app using Django framework and python for backend-integration, along with HTML/CSS for front end
- Deployed the application through the Heroku cloud platform to be able to access web-app externally

## CAMPUS INVOLVEMENT

### Engineering Council Leadership Committee at UIUC

*August 2017- May 2018*

- Organized events happening within engineering college such as fairs, conferences, and talks
- Exercised soft skills in order to effective relay communications between different groups within the council

## INTERESTS AND HOBBIES

Playing basketball or golf, losing in fantasy sports, going to social events, and gaming