

# SEUNG MIN (David) BAEK

🏠 seungmindavid.github.io   📧 seung.min.baek@vanderbilt.edu   📞 1-(629)-245-1988

## EDUCATION

**Vanderbilt University** – Nashville, TN  
*Master of Science in Computer Science*

Expected: May 2024  
**GPA 3.52/4.00**

**Indiana University** - Bloomington, IN  
*Bachelor of Science in Computer Science*

August 2013- May 2019

## WORK EXPERIENCE

**DANAL** – Bundang, South Korea  
*Data Analyst in Risk Management Team*

March 2020 – Apr 2022

- Established a robust rule-based Fraud Detection System with SQL Stored Procedure to proactively mitigate recurring instances by developing risk management code through a comprehensive analysis of historical fraud transaction patterns
- Contributed to the advancement of an algorithm for assessing customers' creditworthiness in a mobile phone payment service, conducting in depth analysis of payment rates, transaction history, and incorporating data from mobile operators to enhance the accuracy of the credit identification process
- Constructed web server for the UnionPay payment service within the PAYCOIN virtual asset mobile application and developed Python web RESTful API with Flask to execute SQL stored procedures to facilitate secure transactions
- Architected the database schema for emerging payment services, including LGPAY and account transfer services, employing Open Banking API to ensure connectivity and data flow
- Implemented a comprehensive visualization strategy by interfacing SQL Server with Tableau, producing daily reports that encompass server storage capacity, average execute times of SQL stored procedures for each call, occurrences of suspicious transactions, and consumers' debt ratios
- Automated blocking suspicious IP address through a SQL job scheduler that executes SQL stored procedure which analyzes the credibility of IP addresses based on transactional history within a one-month timeframe

**TMON** - Seoul, South Korea  
*Data Analyst Intern in Cross Sell TF*

May 2017 – August 2017

- Collaborated with the project leader in development of a sophisticated personal recommendation engine which designed to predict consumer preferences by clustering correlated products, aiming to enhance cross selling strategy and resulting in a 190% increase in click-through rate (CTR)
- Developed SQL queries to evaluate the effectiveness of recommendation strategies by scrutinizing the executed strategy through the calculation of key metrics, including CTR, conversion rate (CVR), and gross revenue

## LEADERSHIP EXPERIENCE

**Innovative Idea Tank** - Bloomington, IN  
*Co-Founder*

February 2018 – May 2019

- Co-founded an organization aimed at inspiring Indiana University Bloomington students with entrepreneurial ideas, contributing to the development and realization of viable products as one of the founding members
- Engaged in the CLAPP Idea Competitions, presenting a transportation-providing application concept and subsequently developing a prototype utilizing XCode

**Capital Defense Command, 1<sup>st</sup> Security Group** - Seoul, South Korea  
*Squad Leader (Sergeant)*

August 2014 – May 2016

- Directed a team of 8+ squad members during the 'Inwang military operation' training, earning recognition as an 'Honored Soldier' alongside battalion members for leadership and proficiency in capturing adversaries who simulated sniper attacks

## CERTIFICATES

**Neural Networks and Deep Learning** – DeepLearning.AI (Coursera)

**Machine Learning** – Stanford University (Coursera)

**Mathematics for Machine Learning: Linear Algebra** – Imperial College London (Coursera)

**Mathematics for Machine Learning: Multivariate Calculus** – Imperial College London (Coursera)

**Data Science Professional Certificate: Machine Learning with Python** – IBM (Coursera)

**Applied Data Science with Python Specialization: Machine Learning in Python** – University of Michigan (Coursera)

## TECHNICAL SKILLS

**Languages:** Python, Java, R, MSSQL, MATLAB, Swift

**Libraries:** PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, SciPy, Seaborn, Matplotlib