

Boosung Kim

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Education

Dickinson College

Expected May 2025

Bachelor of Science in Computer Science, Mathematics

Cumulative GPA: 4.0/4.0

Relevant Coursework: Data Structures, Analysis of Algorithms, Object Oriented Programming (OOP), Computer Architecture, Deep Learning, Open Source Development, Probability and Statistics, Computability and Complexity

Honors: Dean's List (All semesters), Pi Mu Epsilon (Math), Upsilon Pi Epsilon (CS), Top 40% in Putnam

Skills

Languages: Python, JavaScript, SQL, Java, C++, TypeScript, PHP, HTML / CSS

Frameworks: Express, Node.js, Django, React, FastAPI, Flask, PyTorch, Tensorflow, Keras

Developer Tools/Technologies: Git, Linux, Docker, AWS (S3, EC2, Sagemaker), CI/CD, REST API

Databases: MySQL, PostgreSQL, MongoDB

Experience

NAEIL Consulting, Co.

May 2023 – Jul 2023

Software Engineering Intern

Seoul, Korea

- Engineered an automated Natural Language Processing (NLP) translation pipeline of marketing documents using Python, FastAPI, OpenAI API, and AWS Sagemaker, replacing manual translation services and saving \$2,000 monthly
- Improved customer satisfaction scores by 15% through fine-tuning the OpenAI GPT-3 model with custom datasets
- Achieved 90% code coverage of the REST API by implementing PyUnit unit tests using Test Driven Development

Republic of Korea Army Intelligence

Oct 2021 – Apr 2023

Underground Tunnel Detection Specialist (Data Engineer)

Paju, Korea

- Identified and located over 30 North Korean underground activities by processing geological sound data with Fast Fourier Transformation and Spectral Analysis techniques using SQL, Excel, and proprietary military tools
- Implemented a scalable PostgreSQL database system to store reconnaissance mission logs, reducing average data entry time from 50 to 10 minutes per mission through streamlined data management
- Automated data pipeline and report generation using SQL, VBA, and Python, saving 6 hours of weekly manual work

Dickinson College Robotics Lab

May 2021 – Aug 2021

Computer Vision Research Intern under Professor John MacCormick

Carlisle, PA

- Developed Convolutional Neural Network (CNN) visualization pipelines for a custom dataset using Deconvolution, Filter Visualization, and Activation Maximization techniques written in Python and Tensorflow for easier interpretability
- Reduced configuration conflicts by 71% through debugging the Caffe directory structure, C++ dependencies, and OpenCV configuration, while containerizing with Docker
- Improved Top-5 accuracy by 8% by substituting of the ZFNet backbone model with the VGG16 model

Rector Biochemistry and Molecular Biology Research Lab

Jan 2021 – May 2021

Computational Research Assistant under Professor Michael Roberts

Carlisle, PA

- Designed a scalable end-to-end Machine Learning pipeline, collaborating with a team of 3 researchers, for analyzing cancer relapse rates based on 20,000 gene map samples using Random Forest and SVMs in Python scikit-learn
- Achieved an accuracy of 88.2% and F1 score of 93.1%, indicating a correlation between EGR1 level and cancer relapse

Projects

Frody: real-time credit card detection (Python, Spring Boot, dbt, Google Cloud, BigQuery) boosungkim.com/frody

- Implemented a real-time credit card fraud detection system on Google Cloud using Java Spring Boot for server-side application, BigQuery for data warehousing, dbt for data transformation, and Tensorflow for machine learning
- Awarded "Most Technically Complex Hack" by **PennApps XXIV** and "Best Distributed Systems" by **Five Rings**

Stellori (React, MongoDB, Express, Node.js, Docker, AWS S3/EC2)

<https://stellori.tools>

- Developed an AI-driven platform involving multi-tiered architecture for script generation and background music synthesis to empower YouTube content creators
- Integrated REST API using MongoDB, Express, React, Node.js, OpenAI, and MusicGen

Leadership and Extra-Curricular

Demilitarized Zone Reconnaissance Team Leader, Republic of Korea Army

Apr 2022 – Apr 2023

Resident Advisor, Dickinson College Residence Life and Housing Office

Aug 2020 – May 2021

Teaching Assistant, Dickinson College Math and CS Department

Jan 2020 – May 2021