

Boosung Kim

Carlisle, PA - boosung@boosungkim.com

<https://boosungkim.com> - [linkedin.com/in/boosungk](https://www.linkedin.com/in/boosungk) - github.com/boosungkim

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, Spring Boot, Django, React, FastAPI, Flask, PyTorch, Tensorflow, Keras

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

Databases: MySQL, PostgreSQL, MongoDB, Firebase, Google BigQuery

Experience

84 Lumber

Sep 2023 – Present

Software Engineering Intern (Volunteer)

Carlisle, PA

- Design a system architecture redesign to enhance system performance and scalability
- Develop a Copilot pipeline that translates over 50,000 lines of legacy C basic code to Java and Python

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 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

Data Engineer (Underground Tunnel Detection Specialist)

Paju, Korea

- 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
- 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
- Automated data pipeline and report generation using SQL, VBA, and Python, saving 6 hours of weekly manual work

Tome Robotics Lab

May 2021 – Aug 2021

Computer Vision Research Intern under Professor John MacCormick

Carlisle, PA

- Developed Convolutional Neural Network (CNN) visualization pipelines 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

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: credit card detection (Google Cloud, BigQuery, Spring Boot, React, Firebase, dbt) boosungkim.com/frody

- **First place** in PennApps 2023: **Five Rings** "Best Distributed Systems" and "Most Technically Complex Hack"
- Cloud-based real-time credit card fraud detection microservice that immediately notifies users about fraudulent activities

Chess for Army Soldiers (Python, C++, MySQL, Django) github.com/boosungkim/custom-chess-engine

- Established the first game entertainment for soldiers, resulting in a 10% increase in daily usage of the recreational room
- Created a chess engine with Minimax and Alpha-beta pruning AI and Django web app with MySQL to store scores

Leadership and Extra-Curricular

Teaching Assistant, Dickinson College Math and CS Department

Aug 2023 – Present

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