Boosung Kim

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Education

Dickinson College Expected May 2025
Bachelor of Science in Computer Science and Mathematics GPA: 3.99/4.00
Relevant Coursework: Data Structures, Analysis of Algorithms, Object Oriented Programming, Computer Architecture, Computer Networks, Operating Systems, Deep Learning, Open Source Development, Probability and Statistics
Honors: Dean's List (All semesters), Pi Mu Epsilon (Math), Upsilon Pi Epsilon (CS), Top 40% in Putnam

Experience

Box, Inc Jun 2024 – Aug 2024
Software Engineering Intern - Storage Infrastructure Redwood City, CA

- Developed microservices in Scala to streamline and scale SharePoint file conversions, optimizing a system that processes 25% of all company-wide conversions, reducing processing time and enabling new preview and AI features
- Designed and implemented a dual-write mechanism to ensure atomic updates across two distributed databases, maintaining data consistency and system reliability in the file conversion workflow
- Resolved critical encryption dependency issues in the microservices architecture, preventing potential service failures

Republic of Korea Army Intelligence Oct 2021 – Apr 2023
Data Engineer (Underground Tunnel Detection Specialist) Paju, Korea

- Implemented a 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 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 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 Forsest 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

Skills

Languages: Java, Python, Scala, JavaScript, SQL, Bash, PHP
Frameworks: Spring Boot, Django, Flask, Node.js, FastAPI, React, PyTorch, TensorFlow
Developer Tools: Docker, Kubernetes, Google Cloud, AWS, MySQL, PostgreSQL, MongoDB, Jenkins, Splunk, Git, Linux

Projects

Frody: Credit Fraud Detection (Google Cloud, Spring Boot, React, Firebase, dbt) boosungkim.com/works/frody

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

Chess (Python) boosungkim.com/works/chess

- 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 Jan 2020 – Present
Resident Advisor, Dickinson College Residence Life and Housing Office Aug 2020 – Present
Demilitarized Zone Reconnaissance Team Member, Republic of Korea Army Jan 2022 – Jan 2023