BOOSUNG KIM

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EDUCATION

Dickinson College   May 2025
Bachelor of Science in Mathematics and Computer Science   Cumulative GPA: 4.0/4.0
Coursework: Data Structures, Analysis of Algorithms, Object Oriented Programming, Computer Architecture, Deep Learning, Large Scale Open Source Development, Probability and Statistics, Programming Language Structures
Honors: Dean's List (All semesters), Pi Mu Epsilon (Math), Upsilon Pi Epsilon (CS), Top 40% in 2019 Putnam

TECHNICAL SKILLS

Languages: Python, C++, Java, SQL, JavaScript, HTML, CSS, PHP
Frameworks: PyTorch, TensorFlow, scikit-learn, Keras, Express, React, Node.js, Django
Developer Tools/Technologies: Git, Linux, MySQL, MongoDB, Docker, VSCode, Vim, AWS EC2/Sagemaker, Apache

WORK EXPERIENCE

NEW Consulting, Co.   Jun 2023 – Jul 2023
Software Engineering Intern   Seoul, Korea
- Spearheaded the development of an automated NLP translation pipeline for marketing documents using Langchain, OpenAI API, and AWS Sagemaker, resulting in company cost savings of approximately $2,000 per month
- Deployed FastAPI services that handle automatic question and answer generation with a T5-based model using Docker
- Integrated automated API testing systems into CI/CD pipeline using the Postman framework

Republic of Korea Army Intelligence   Oct 2021 – Apr 2023
Data Analyst for the Tunnel Neutralization Team   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
- Automated 25% of the data pipeline and Excel tasks using SQL, VBA, and Python saving 6 hours of weekly manual work
- Led 13 successful reconnaissance team missions to maintain specialized military computers in the Demilitarized Zone

Dickinson College Tome Robotics Lab   May 2021 – Aug 2021
Computer Vision Research Intern under Professor John MacCormick   Carlisle, PA
- Developed Convolutional Neural Network visualization pipelines for a custom dataset using Deconvolution, Filter Visualization, and Activation Maximization techniques written in Python and Tensorflow for easier interpretability
- Improved Top-5 accuracy by 8% through the substitution of the ZFNet backbone model with the VGG16 model
- Reduced 70% of environment issues by debugging and containerizing the visualization pipelines with Docker

Rector Biochemistry and Molecular Biology Research Lab   Jan 2021 – May 2021
Bioinformatics Research Assistant under Professor Michael Roberts   Carlisle, PA
- Coordinated the Computational Biology sub-team to develop a scalable end-to-end data pipeline for analyzing cancer relapse rates based on 20,000 gene map samples using Random Forest, SVMs, and XGBoost in Python scikit-learn
- Achieved a balanced accuracy of 88.2%, precision score of 93.8%, recall score of 93.4%, and F1 score of 93.1%

PROJECTS

Goodreads Sentiment Analysis (Python, PyTorch, Selenium, PostgreSQL, Docker, AWS EC2)   Project in-progress
- Engineered an End to End Machine Learning project to perform sentiment analysis on Goodreads comments, using selenium to scrape Goodreads comments, PyTorch to train character CNN models, and PostgreSQL to store the data
- Containerized the code using Docker Compose and deployed to AWS EC2

Deep Fiction (React, MongoDB, Express, Node.js, AWS EC2)   github.com/boosungkim/deepfiction
- Leveraged Large Language and Diffusion models to create a MERN stack social media platform on AWS EC2
- Implemented RESTful API and endpoints for CRUD operations, allowing users to upload stories with DALL-E images

Army Chess (Python, C++, MySQL, Django)   github.com/boosungkim/custom-chess-engine
- Created a C++ chess engine with Minimax and Alpha-beta pruning AI and Django web app with MySQL for player scores
- Established a user base of over 20 soldiers per week, resulting in a 10% increase in daily usage of the recreational room

LEADERSHIP AND EXTRA-CURRICULAR

Resident Advisor, Dickinson College Residence Life & Housing Office   Aug 2020 – Present
Teaching Assistant, Dickinson College Math & CS Department   Jan 2020 – Present
Partnered YouTube Content Creator in Tech, youtube.com/@converge2diverge   Jan 2018 – Present