Daniel H Kim

6250 Walnut St, Philadelphia PA 19139

dk.hyunil@gmail.com
734-800-9963

Projects

Satellite Image Recognition (TomTom) — June - Sep 2019
- Implemented an open source machine learning model on a dataset of satellite imagery to predict building outlines.
- Trained the model on EC2 instances using AWS Deep Learning AMIs.

Bazaar (team project) — Jan - May 2019
- Created an art buy and sell website with a React frontend interacting with a REST API built with express.js.
- Used the Stripe API to enable payments through the website.

DartCal (team project) — April 2019
- Used Watson to parse student emails to recognize event title, date and time.
- Automatically put parsed event into a joint events calendar website.

Chess AI — Jan 2019
- Developed a chess AI that uses a minimax search algorithm to deduce the best possible move.
- Implemented iterative deepening and alpha-beta pruning to optimize runtime.

Electric Piano — May 2018
- Built a polyphonic electric piano with a sustain pedal on a FPGA board, coded in VHDL.
- Optimized resource utilization and critical timing paths by conducting modular tests.

Code Scavenger Hunt (team project) — May 2017
- Employed ncurses to design a campus map displaying major buildings and the locations of each scavenger, updating every time a scavenger sent a message through their Pebble watch.
- Created custom data structures (hash table, set and counter-set) to hold game state data.
- Delivered functions to parse and handle messages sent from Pebble watches to the game server.

Tiny Search Engine — Mar - April 2017
- Built a functional search engine comprised of three components: a web crawler, indexer and querier.
- Applied recursion to retrieve embedded URLs from a seed URL, limiting exploration to a given depth.
- Ordered search results based on relevance, as well as supporting "and" and "or" operators.

Work Experience

Republic of Korea Army, South Korea — Sep 2019 – April 2021
Sergeant E-5, Squad Leader
- Organized and directed a squad of signaler soldiers in combat training.

TomTom, Lebanon, NH — June - Aug 2019
Software Development Intern
- Worked with a group of 5 interns to create software solutions for TomTom's mapping team.

Development Strategy Team, School of Public Administration, Sungkyunkwan University — June - Aug 2018
Research Assistant
- Compiled South Korea's development strategies of the past 50 years into a 130-page study.
- Evaluated the potential impact of policies by comparing political and economic indicators.

Lynd Lab, Thayer School of Engineering, Dartmouth College — Jan - May 2016
First-year research assistant
- Identified genes that increase ethanol production in organisms for the consolidated bioprocessing of biomass to biofuels, using the CLC Sequencer Viewer program to construct and edit DNA sequences.

Education

Dartmouth College, Hanover, NH — June 2019
Bachelor of Arts in Computer Science, Minor in Philosophy. GPA 3.25/4.0
Relevant Coursework: Object-Oriented Programming, Software Design and Implementation, Database Systems, Digital Electronics Discrete and Probabilistic Systems, Discrete Math in Computer Science, Numerical Methods in Computation, Microprocessors, Machine Learning and Statistical Data Analysis, Artificial Intelligence, Cognitive Computing

Technologies & Skills

Java, C, Python, Matlab, Git (Proficient)
SQL, MongoDB, HTML, CSS, JavaScript, React, Amazon AWS (Prior experience)
Native fluency in English and Korean