JUN HA LEE

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github.com/andy0530

EDUCATION

University of California - Davis — Expected Graduation 2024
B.S. in Computer Science, B.S. in Statistics - Machine Learning Track
- Dean's Honor List - Spring 2019, Winter 2022
- Major GPA: 3.87/4.00

WORK EXPERIENCE

Road to Success Education — Seoul, Korea
Web Developer / HTML, LaTeX — April 2021 - August 2021
- Created online testing platform that provides practice standardized test for high school students
- Refactored data processing of user management platform for automated grade reporting system
- Taught high-school mathematics, physics, and chemistry

ROK Army The 37th Infantry Division — Chungcheongbuk-do, Korea
Satellite Operator, Squad Leader — October 2019 - April 2021
- Managed satellite communication channel to serve as a form of backup communication
- Implemented framework to use satellite for communication in any remote area
- Operated cryptographic equipment and radio/frequency antennas
- Translated for ROK-US joint military exercise

SOFTWARE PROJECTS

Opponent-Based AI Optimality / Python
- Implemented Minimax AI, Expectimax AI, and Monte Carlo tree search AI on Checkers game interface
- Increased Efficiency of Minimax AI by implementing alpha-beta pruning
- Developed game-specific evaluation function to determine current game-state
- Conducted research to show optimality of Expectimax AI on stochastic opponent compared to Minimax AI

SearchBooks / C++
- Created a program that catalogs books and searches requested books using linear search and binary search
- Analyzed and justified the time complexity for each search and the application in a real-life situation
- Used operator overloading to effectively sort with multiple criteria

Congestion Control Protocol / Python
- Created a custom UDP-based congestion control protocol that ensures reliable delivery of data
- Implemented dynamic timeout implementation using statistical interpretation of previous metrics
- Used quick re-transmissions with duplicate acknowledgement for fast transmission of data
- Designed a sliding window with varying window size to outperform TCP Tahoe

Congestion Control Protocol / R
- Developed regression model to explain the graduation rate given statistics from the 1995 issue of US News and World Report
- Fitted a first-order regression model and generated residual plots to identify heteroscedasticity
- Used step-wise selection algorithm and test-statistics to identify best subset

SKILLS

Languages: English - Fluent, Korean - Fluent
Programming Languages: Python, C/C++, R, HTML
Technical Skills: Microsoft Excel, Microsoft PowerPoint Adobe Illustrator, Adobe Photoshop