TITUS HYUNKYU LEE

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EDUCATION

University of Virginia, School of Engineering and Applied Science, Charlottesville, VA   *August 2023 - Present*
B.S. in Electrical Engineering and Computer Engineering, Minor in Engineering Business.
- Cumulative GPA: 3.9/4.0.
- Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics and Theory, Mathematics of Information, Computer Systems and Organization, Applied Circuits, Digital Logic Design.
- Recipient, A. James Clark Scholars Program at UVA, Clark Scholar (one of 17).

Study Abroad Program: UVA in Guatemala   *Summer 2024*
- Studied engineering and public health aspects such as power plants, infrastructure, healthcare, potable water, sanitation, environment, and education, and examined the influence of economic, political, cultural, and historical factors on these aspects.

PROJECTS

Soccer (EPL) Match Predictor   *Summer 2024*
- Developed an English Premier League (EPL) Match Predictor using a Random Forest Classifier, achieving an accuracy and precision score of approximately 0.7 by employing hyperparameter tuning and handling class imbalance through oversampling techniques.
- Implemented a comprehensive web scraper to collect match data from the previous five seasons, enabling real-time predictions for upcoming matches and enhancing the model's predictive performance.

Wordle Solver   *Summer 2024*
- Engineered a sophisticated Wordle Solver in Python, leveraging information theory concepts such as entropy and probability calculations to optimize guessing strategies, achieving high efficiency through parallel processing.
- Devised an interactive simulator demonstrating the solver's effectiveness with statistical insight, yielding an average of 3.60 guesses per word after 1000 simulations.

Task Manager Web-Application   *Spring 2024*
- Created a task manager web application using HTML, CSS, and JavaScript, integrating various features such as a Pomodoro timer, live date, time, and weather updates, to-do lists, study playlists, etc.
- Utilized JSON and browser local storage to ensure reusability of website across different sessions.

AI Tic-Tac-Toe Application   *Fall 2023*
- Created a Tic-Tac-Toe application using Python with options of either playing with two players or against a computer model.
- Coded AI program executing a Pure Monte-Carlo Tree Search algorithm in Python. Engineered application to limit the number of simulations determining the accuracy of the AI model based on the user's desired difficulty level.

Personal Portfolio Website - titushyunkyu.com   *Fall 2023*
- Designed and developed a comprehensive personal portfolio website leveraging HTML, CSS, and JavaScript, showcasing various projects and professional achievements. Implemented responsive design principles to ensure optimal viewing on devices of all sizes.

SKILLS

- Programming: Python, Java, JavaScript, JSX, Bash.
- Technical: ReactJS, MATLAB experience, Microsoft Office Suite (Word, PowerPoint, and Excel), Computer-Aided Design.
- Languages: English (Native), Korean (Native), Tagalog (Basic), Swahili (Basic).

WORK EXPERIENCE

Camp Counselor, **Triple R. Ranch,** Chesapeake, Virginia   *Summer 2021*
- Supervised and led a group of 20 elementary boys, facilitating various activities such as outdoor games, recreation, and music sessions. Ensured safety and maintained a positive environment, studying equipment needs and implementing necessary improvements.

AWARDS AND RECOGNITIONS

- Honors: High School Valedictorian (2023), Graduated High School with High Honors (2023).
- Awards: Faith Academy STEM Award (2023), John Philip Sousa Award (Band Musicianship Award, 2023), AP Capstone Diploma (2023), AP Scholar with Distinction Award (2023), AP Scholar with Distinction Award (2022).

LEADERSHIP EXPERIENCE

Chairman, **Faith Academy Student Executive Council,** Rizal, Philippines   *August 2022 - May 2023*
- Organized and coordinated various school activities and social events such as high school retreats, banquets, fundraisers, etc. Presented regular announcements and speeches to student body of about 300.