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 Business.
- Major GPA: 4.0/4.0, Cumulative GPA: 3.9/4.0.
- Recipient, A. James Clark Scholars Program at UVA, Clark Scholar (one of 17).
- Activities: Theta Tau Professional Engineering Fraternity, Computer Network and Security Club, Mechatronics and Robotics Society.
- Relevant Coursework: Applied Circuits, Digital Logic Design, Computer Systems and Organization, Data Structures and Algorithms, Discrete Mathematics and Theory, Mathematics of Information.

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*
- Devised 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*
- Constructed a comprehensive web-based productivity tool using HTML, CSS, and JavaScript, integrating features such as a Pomodoro timer, live date and time, weather updates, to-do lists, and study playlists for enhanced user productivity.
- Leveraged JSON and browser local storage to ensure data persistence across sessions, allowing users to maintain task lists and settings seamlessly, improving overall user experience and application reliability.

AI Tic-Tac-Toe Application   *Fall 2023*
- Created a Python-based Tic-Tac-Toe game with both two-player mode and a computer opponent, incorporating a Pure Monte Carlo Tree Search algorithm allowing users to adjust difficulty by varying the number of simulations, providing a tailored and challenging gameplay experience.

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, React, Bash, x86 Assembly, C, VHDL.
- Simulation Tools: AutoCAD, Fusion 360, NI MultiSim, Quartus.
- Languages: English (Native), Korean (Native), Tagalog (Basic), Swahili (Basic).

VOLUNTEER EXPERIENCE

Mentor, **Computer4Kids,** Charlottesville, VA   *August 2024 - Present*
- Mentored a high school student weekly, guiding through a semester-long engineering project to develop skills and interest in STEM. Utilized engineering concepts to support project planning, development, and execution.
- Created a supportive learning environment encouraging critical thinking and problem-solving. Facilitated hands-on experience to help the student apply theoretical knowledge to practical challenges.

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).

WORK EXPERIENCE

Library Circulation Assistant, **Clemons Library,** University of Virginia, Charlottesville, VA   *August 2024 - Present*
- Assisted patrons with checking out materials, answering questions, and providing basic IT support at the main desk. Managed the organization and re-shelving of returned items while working flexible shifts, including weekends and late nights.