Kael Anderson

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Education

Kennesaw State University - 3.77 GPA — Marietta, GA
Bachelor of Science in Computer Science — *Aug. 2021 – May 2025*

- President's List, Fall 2023 - Present
- Dean's List, Spring 2022 - Spring 2023

Thomas County Central High School — Thomasville, GA
High school Diploma — *Aug. 2017 – May 2021*

Experience

Undergraduate Research Assistant — March 2024 – Present
Kennesaw State University XRI Lab — *Marietta, GA*

- Contributed to research funded by DARPA and DEVCOM aimed at developing strategies to reduce or eliminate cybersickness, a type of motion sickness present in VR/MR users
- Created and delivered presentations on research articles, providing in-depth analysis to fellow researchers and the supervising professor
- Utilized machine learning algorithm outputs to implement real-time shader adjustments in VR/MR simulations, with the goal of reducing cybersickness

Projects

Hackathon Project: GreenPath - 1st Place, Spring 2024 | *Python, SQL, Git, Google Maps API*

- Led a team in developing "GreenPath," a mapping application that offers two routes: one optimized for time, and another for fuel efficiency to reduce carbon emissions
- Designed and implemented the map display and integrated API calls to Google Maps for route generation
- Used SQL to analyze vehicle fuel efficiency data, enabling precise calculation of carbon emissions for users' vehicles
- Managed the Git repository and collaborated on the project presentation, effectively communicating our solution's impact

Hackathon Project: StudyAngel - 2nd Place, Fall 2023 | *Python, Git, LangChain, SerpAPI, Python REPL*

- Led a team in developing "StudyAngel," a web app that uses an LLM to generate study questions and provide step-by-step solutions
- Used LangChain to enable the language model to perform functions like internet searches and running code, allowing it to intelligently solve problems
- Collaborated with team members to create a captivating and informative presentation on StudyAngel

Julia Compiler | *Python*

- Created a lexical analyzer to break Julia code into a sequence of tokens
- Constructed a recursive-descent parser to analyze the sequence of tokens, and create a syntax tree that follows Julia's grammar rules
- Designed and implemented a stack-based interpreter that traverses the syntax tree and builds a stack of commands that it executes after the entire tree is traversed.

Data Analysis on the Relationship Between Sleep and Mental Health | *Scala*

- Selected relevant vectors from the National Poll for Healthy Aging dataset to explore the relationship between sleep and mental health
- Implemented a Naive Bayes classification model to predict mental health based on sleep characteristics
- Evaluated the model's performance and iteratively adjusted it to improve accuracy, precision, and recall

Technical Skills

Languages: Python, Java, Scala, SQL, JavaScript, HTML/CSS, C#
Developer Tools: Git, VS Code, Visual Studio, Apache Spark, IntelliJ, Google Colab
Libraries: NumPy, pandas, Matplotlib, React, Streamlit