Zak Sujkovic

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Education

Binghamton University — Binghamton, NY
B.S. Computer Science — *Aug. 2024 – May 2028*

Technical Skills

Languages: C++, C, Java, Python, Javascript, MIPS Assembly, HTML, CSS, SQL
Frameworks: React.js, React Native, Node.js, TensorFlow, OpenGL, Qt, Django, REST
Software and OS: QTspim, Visual Studio Code, Vim, Eclipse, Git

Experience

Undergraduate Research Assistant — Jan. 2025 – Present
Binghamton University — *Binghamton, NY*

- Conduct a comprehensive review of existing literature on the application of large language models in mental health, identifying existing frameworks and algorithms
- Evaluate the ethical considerations and potential biases in large language models when applied to mental health contexts
- Analyze various research papers to assess the impact of language models on mental health diagnostics, therapy, and support systems
- Participate in weekly meetings to discuss progress, challenges, and next steps, providing input for further directions

Summer Youth Employment Program — June 2021 - Aug. 2021
Center for Family Life — *Brooklyn, NY*

- Attended meetings to discuss social and equity issues in New York
- Collaborated with other interns to discuss environmental and social issues and how to solve them
- Presented a slideshow to other SYEP groups analyzing social and environmental topics

Projects

Fake Email Detector | *Python, TensorFlow, Javascript, Node.js* — Feb. 2025 – Present

- Train and fine-tune a TensorFlow-based machine learning model using a large dataset of legitimate and phishing emails, applying NLP techniques for text classification
- Implement a user-friendly front-end interface using JavaScript, allowing users to easily input and analyze email data for potential threats
- Integrate various data pre-processing steps, such as tokenization and feature extraction, to enhance the accuracy of the detection model

Terrain Generator | *C++, OpenGL, Qt, GLSL* — Feb. 2025 - March 2025

- Implemented procedural terrain generation with Perlin noise-based heightmaps
- Designed and optimized GLSL shaders for transformations and rendering through Phong shading for realistic lighting effects
- Added Qt sliders for real-time control over terrain parameters
- Utilized VAO, VBO, and EBO for efficient mesh rendering

Stock Market Dashboard | *Javascript, React.js, React Native* — Jan. 2023 - Feb. 2023

- Developed a Stock Market Dashboard using React, React Native, and JavaScript, launched via npm for both web and mobile platforms
- Implemented real-time stock data fetching from Alpha Vantage, dynamically displaying stock prices and historical trends
- Designed an interactive stock price chart with dynamic updates for intuitive data visualization

Leadership

Alfadila Community Services | *Community Assistant* — June 2024 - Aug. 2024

- Assisted with back to school giveaways and supplies replenishment
- Prepared a daily food pantry for people in need and students
- Collaborated with philanthropic organizations in Bay Ridge, Brooklyn to give out clothing