Kenneth Ye

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Experience

Math and Science Tutor March 2022 – February 2023
Schoolhouse World *Remote - Mountain View, CA*

- Tutored students on the content of AP Calculus AB, AP Physics 1, and AP Chemistry over Zoom
- Audited fellow tutors' sessions to maintain and enforce the platform's guidelines and rules, enhancing the overall tutoring quality and safety of the platform
- Ranked **top 5%** out of all tutors for sessions hosted and number of learners impacted, hosting 60+ sessions with 83 learners impacted across 10 countries and receiving **101 positive ratings**, with 61 super helpful ratings

Co-Founder September 2021 – June 2023
Extra Mile *Mississauga, ON*

- Conducted lectures and tutored students on key concepts covered in AP Physics 1 and AP Calculus, increasing comprehension and skills in students
- Organized peer-study groups for **70+ students** to help students prepare for various math contests and AP exams, creating a welcoming community for students to support and assist each other in studying
- Hosted mock AP Calculus AB and AP Physics 1 exams for students, allowing students to simulate exam environments

Projects

AccessibleGPT | *Express, React, HTML, CSS, JavaScript Git* January 2023 – Present

- Built a GPT clone using **React** with added accessibility features such as **text-to-speech support** and **high contrast mode**, making ChatGPT more accessible to the visually impaired
- Implemented an **Express.js backend** and developed a **RESTful API** to communicate from the frontend to backend
- Integrated OpenAI's **GPT API** using **Express.js** to produce AI-driven responses to the user's messages
- Developed text-to-speech capabilities by leveraging OpenAI's **text-to-speech API**

Personal Portfolio Website | *React, HTML, SASS, JavaScript* December 2023 – Present

- Utilized **React** to create a dynamic front-end user interface with optimized performance and interactivity
- Implemented **client-side routing** with **React Router** to route between pages without full-page reloads or making any server requests, leading to faster navigation and a more streamlined user experience
- Incorporated animations using **animate.css**, increasing the visual appeal of the website and making the UI more responsive
- Styled pages using **SASS**

Aho-Corasick Algorithm Visualizer | *React, D3, HTML, CSS, JavaScript, Git* Dec. 2022 – Jan. 2023

- Built a interactive React web app that visualizes how the **Aho-Corasick** string search algorithm works
- Visualized the Aho-Corasick **finite-state machine** (FSM) using the **D3.js** framework
- Created a tree data structure within **JavaScript** using Objects to represent the Aho-Corasick FSM
- Recursively parsed the tree to format into **JSON** form for D3.js to visualize
- Coded the algorithm and created an animation of how the algorithm searches through the FSM using JavaScript

Education

University of Waterloo Waterloo, ON
Bachelor of Computer Science - 3.94 GPA *September 2023 – May 2028*

Technical Skills

Languages: Python, Java, C/C++, JavaScript, HTML/CSS, SASS, Racket
Frameworks: React, Node.js, D3.js, Express.js
Developer Tools: Git, Linux, VSCode, Eclipse