

Kenny Ngo

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Education

University of Michigan

Bachelor of Science in Computer Science, Data Science, and Applied Mathematical Sciences

Ann Arbor, MI

May 2023

Projects

Wizard101 Dance Game | Python, PyAutoGUI, Tkinter, PyInstaller | [GitHub Link](#) Jun 2023 – Oct 2023

- Implemented advanced computer vision arrow detection to produce an algorithm capable of capturing and automatically replaying randomized arrow sequences displayed in game with 99% accuracy
- Produced comprehensive usage documentation with direct instructions to facilitate new users in program usage

Discord Bot | JavaScript, Node.js, Docker, AWS Nov 2021 – Sep 2023

- Programmed a specialized bot with Node.js for 3 private servers to streamline experience for 50+ users
- Engineered a code compilation and packaging system, enabling moderators to seamlessly run the application without any supplementary installations, reducing preparation and setup time by 80%

StatTrack | Python, Swift, TensorFlow Lite, Nginx, Jupyter Notebook | [GitHub Link](#) Aug 2022 – Dec 2022

- Collaborated on a team of 7 developers to gather and assessed user requirements, and formulated a machine learning algorithm for detecting basketball possession and shot attempts, determining if a shot was made or missed
- Devised and built the UI, ensuring a visually appealing and user-friendly mobile interface

Facebook Clone | HTML, CSS, SCSS, JavaScript, ReactJS, Python, Flask, SQL Feb 2022 – Apr 2022

- Integrated multithreaded sockets and server sent events to create a live chat room application between 2 users
- Built a REST API to handle 10+ simultaneous user requests while preventing vulnerable side effects

Search Engine | HTML, CSS, Python, Flask, SQL, Bash, Apache Hadoop, Selenium, AWS Mar 2022 – Apr 2022

- Adapted Google's PageRank algorithm to improve search query speed by 10%, decreasing irrelevant results by 20%
- Developed a MapReduce pipeline for efficient page indexing, displayed with a user-friendly Google-styled interface

Experience

STEM Tutor Sep 2019 – Jun 2023

University of Michigan

Ann Arbor, MI

- Tutored 4 students per semester in introductory computer science, maths, and stats courses, conducting 4 hours of weekly one-on-one or group sessions with tailored lesson plans, resulting in 10% increase in student average grades
- Promoted effective coding practices to improve code readability and simplicity, reducing total coding time by 20% by offering hands-on guidance, code review, and collaborative paired programming sessions twice weekly

Freelance Assistance Sep 2022 – Dec 2022

Volunteer

Ann Arbor, MI

- Conducted rigorous testing, including unit tests and code analysis with test coverage assessment, reducing critical software defects by 2% and 4% improvement in alpha-release user experience quality in a scrum-like environment
- Participated in code review to assist in debugging and mitigating risks, reducing post-release issues by 5%

Skills

Languages: Python, C, C++, JavaScript, TypeScript, HTML, CSS, Java, SQL, Bash, R, MATLAB, Swift, C#, .NET
Frameworks & Tools: Git, React, Node.js, Flask, Docker, AWS, GCP, Figma, PostgreSQL, MongoDB, Postman, JUnit

Extracurricular

Pickleball Coach and Volunteer Jul 2023 – Sep 2023

- Volunteered at local Grand Rapids Pickleball Club by supporting instructors in introductory to pickleball classes and championship tournament events with over 100 participants by helping with registration logistics
- Initiated and successfully managed a competitive tournament bracket by overseeing a diverse group of 20+ participants, orchestrating match schedules, and ensuring a smooth progression of the event

Vietnamese Student Association (VSA) Sep 2019 – Apr 2023

- Collaborated with 10 students to program stage lights for VSA's annual cultural show, supporting 15 performances
- Mentored 3 incoming VSA members in mentor/mentee program to ease transition by fostering community