ALEXANDRA WONYU

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EDUCATION

Wartburg College   **Waverly, IA**   **May 2023**

Major: Computer Science, B.A. (*cumulative GPA*: 3.87/4.0)   **Minor:** Psychology
Honors: Outstanding Senior in Computer Science, Phi Eta Sigma, National Society of Leadership and Success

Languages spoken: French *(native)*, Japanese, Korean *(fluent)*, Spanish, Mandarin *(intermediate)*

COMPUTER SCIENCE INTERNSHIP EXPERIENCE

React & WordPress Intern | Aboundant | Remote   **January 2022 – April 2023**
- Implemented UI/UX designs of web forms in React, wrote PHP plug-ins to add server-side validation to forms, and wrote custom WordPress templates to render React forms in WordPress
- Worked remotely in a team of four at a pace of 5-10 hours a week and contributed to the launch of the company's new volunteer management platform
- **Technologies used**: HTML, CSS, PHP, JavaScript, TypeScript, JSON, the WordPress REST API, JSX, React, GraphQL, SFTP, Postman, Webpack, Next, Faust, and WordPress plug-in development

TECHNOLOGY PROJECTS

Math & Computer Science Resources Website | Self-Taught Project | Wartburg College   **April 2023**
- Created and designed a fully responsive React Router website that gathers tens of mixed media resources to help hundreds of students with nine select Wartburg College mathematics and computer science courses
- Successfully deployed the app on GitHub Pages: awonyu9.github.io/math-lab-resources
- **Technologies used**: React.js for front-end, React Router for routing, responsive CSS techniques, Git for version control, Adobe XD for initial prototyping, JSON for organizing resources

Music Quiz Web App | Systems Design | Wartburg College   **September – December 2022**
- Created a fully responsive single-page web app in React: a music quiz game in which users can log into their Spotify account, choose any playlist, and quiz themselves on its songs unlimitedly
- Successfully designed and implemented the app on my own for 10 hours a week over 13 weeks
- **Technologies used**: React.js for front-end, Express.js for OAuth in back-end, Spotify Web API for asynchronously fetching playlist and track data, Git for version control, Adobe XD for initial prototyping

Ray Tracing Engine | Computer Graphics | Wartburg College   **May 2022**
- Created from scratch a Python rendering engine that can ray trace 3D objects and meshes
- Incorporated various features, including reflections, adjustable lighting, shading (Gouraud, Blinn-Phong, Lambert), texture mapping, and a moveable camera
- With a partner, improved the base engine to make it over 100 times faster, and have it produce red-blue anaglyph versions of any set of pictures, creating a short animation to showcase the function

R Studio & Pandas | Data Wrangling & Visualization | Wartburg College   **April 2022**
- Wrangled raw Capital BikeShare data in R Studio and used the leaflet package to create a choropleth, in order to analyze patterns in bicycle rental habits in Washington D.C.
- Joined data frames, cleaned up data using regular expressions, and created plots using the ggplot and dplyr packages in R Studio to analyze information about nuclear reactors
- Created data frames and plots in a Jupyter notebook, using pandas, Matplotlib, and NumPy, to analyze data about gene expression in cancer cell lines

TECHNOLOGY SKILLS

Languages: Python, JavaScript, PHP *(proficient)*, TypeScript, Prolog, Scheme, SQL, Java, Kotlin *(familiar)*
Frameworks/Tools: Supabase, Node, npm, Fetch API, axios, Keras, Make, Jest, unittest, pyControl, tkinter, Flask
Adobe Creative Suite: Illustrator, InDesign, Photoshop, Lightroom, XD