

ALEXANDRA WONYU

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EDUCATION

Wartburg College	Waverly, IA	May 2023
Major: Computer Science, B.A. (<i>cumulative GPA: 3.9/4.0</i>)		Minor: Psychology
Honors: Outstanding Senior in Computer Science, Phi Eta Sigma, National Society of Leadership and Success		
Languages spoken: English, French (<i>native</i>), Japanese, Korean (<i>fluent</i>), Spanish, Mandarin (<i>intermediate</i>)		

COMPUTER SCIENCE INTERNSHIP EXPERIENCE

React & WordPress Intern Abundant Remote	January 2022 – April 2023
<ul style="list-style-type: none">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 WordPressWorked 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 platformTechnologies 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
<ul style="list-style-type: none">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 coursesSuccessfully deployed the app on GitHub Pages: awonyu9.github.io/math-lab-resourcesTechnologies 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
<ul style="list-style-type: none">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 unlimitedlySuccessfully designed and implemented the app on my own for 10 hours a week over 13 weeksTechnologies 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
<ul style="list-style-type: none">Created from scratch a Python rendering engine that can ray trace 3D objects and meshesIncorporated various features, including reflections, adjustable lighting, shading (Gouraud, Blinn-Phong, Lambert), texture mapping, and a moveable cameraWith 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
<ul style="list-style-type: none">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 reactorsCreated 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