Alan Hwader Chu

Software Engineering | Full-Stack Developer

(765) 701-8001· Fremont, CA · ahdchu@outlook.com · LinkedIn/alan-hwader-chu/ · github.com/AlanChu61 ·

SUMMARY

Passionate and technically skilled software developer with experience in full-stack web development and operations management. Adept in delivering high-quality web applications and optimizing processes while leading cross-functional teams to drive customer satisfaction. Equipped with the knowledge and experience to provide accessible and extensive solutions to meet project objectives within agreed parameters.

SKILLS

Programming Languages: JavaScript, Python, Java, C/C++
Web development: React, Node.js, Django, HTML, CSS, jQuery, AJAX
Databases: MongoDB, PostgreSQL
Tools and Technologies: Git, GitHub

SOFTWARE DEVELOPMENT PROJECTS

Pokemon World **Feb. 2023 - present**

- Utilized Django and Heroku to implement user registration and login, allowing registered users to access additional features such as capturing, feeding, and releasing Pokemons.
- Integrated Materialize and Google Fonts to create a visually appealing and responsive user interface.
- Implemented a Pokemon details page, which displays all relevant information about each Pokemon, including their moves, abilities, and stats.
- Designed a Pokemon store, where users can purchase items to drive their Pokemons to evolve.
- Planned future enhancements, such as a comprehensive evolution feature and enhanced Pokemon gym battles.

What's-For-Dinner **Nov. 2022 - present**

- Built the main functionality of "What's for dinner" application, allowing users to add or delete information and search for recipes using API based on the data in the fridge and store them.
- Developed the application using MERN stack and integrated Firebase Google login system.
- Assumed the role of Lead Backend, responsible for building the backend system, including database design and implementation, API development, and server-side logic.
- Contributed to Frontend development and collaborated with the team to improve features and functionality.
- Utilized HTML, CSS, and JavaScript for Frontend, and MongoDB, Express, React, and Node.Js for Backend development and deployed the application on Heroku and Netlify.

Teacher-Management-System **Nov. 2022 - present**

- Designed a web-based application, Teacher Management System, that manages and organizes teacher information using HTML5, CSS, Node.js, Express, and MongoDB.
- Implemented CRUD functionality and basic authentication within the system to enable easy creation, reading, updating, and deletion of teacher data and secure access to the information.
- Developed the backend of the system using Express and Node.js, utilizing MongoDB for data storage, and implementing Mongoose to define schemas for structured and organized storage of data.
- Thoroughly tested the backend routes of the system during development using Postman to ensure proper functionality.
- Utilized HTML5 and CSS to design the frontend of the system, creating an intuitive and user-friendly interface for users to interact with the system.

Group-Pokemon-Builder **Nov. 2022 - Dec. 2022**

- Developed the Pokemon Team Builder, a web-based game that enables players to group six Pokemons into a team.
- Implemented a feature that allows players to select their own team by clicking a button, while the computer randomly groups the Pokemons. Provided the functionality of viewing Pokemons based on a specified ID range within the game.
- Utilized API calls to the PokeAPI to retrieve information on all available Pokemons, allowing for a vast selection of Pokemons to choose from.
- Built the game using JavaScript, jQuery, and AJAX, delivering a dynamic and responsive gaming experience.

- Styled the game using flexbox and grid layouts within HTML5 and CSS, creating a visually appealing and easy-to-use interface for players.

RELEVANT EXPERIENCE

Shanghai Genius Academy, Strategy & Operations Manager and Web Developer **Aug. 2020 - present**

- Constructed teacher training programs and established salary payment standards while also recruiting over 20 part-time teachers from renowned universities worldwide to expand global operations.
- Customized and developed training and education materials that resulted in high student success rates in exams and college applications,achieving over 90% of students receiving offers from top 50 colleges according to the QS world university ranking.
- Led a team of five undergraduates in building a client website using WordPress, providing customer browsing services.
- Developed a Python application for the Curriculum and Finance departments, facilitating the quick calculation of monthly teacher salaries and reducing the need for finance colleagues to repeatedly check results, resulting in an increase in payment efficiency.

KLA-Tencor, Application Development Engineer **Oct. 2021 - June 2022**

- Led a cross-functional team with 6 members(2 algorithm team, 2 customer support engineer and 2 marketing managers) to complete a demo of a new product that increased customer sensitivity by 10x in chip manufacturing, resulting in significant cost savings of several million dollars for the customer.
- Collaborated with the product manager and algorithm team to provide corrective methods to optimize customer's standard operating procedures and demonstrate the value of the next generation product to overcome current limitations.
- Developed Excel Macro scripts to automate Through Focus Study (TFS) procedures and trained a global team of 3 employees, reducing analysis time by over 30% and minimizing the risk of human error.
- Recognized as the most innovative member on the team, becoming the fastest Apps engineer to pass the Level-1 training exam and implementing new tools to optimize workflow.

Purdue University, Graduate Research Assistant **Aug. 2018 - May. 2020**

- Conducted in-depth research focused on the growth and characterization of innovative magnetic CoCrPt thin films for magneto-photonic applications.
- Implemented co-sputter deposition techniques to create nanometer-thick interlayers and successfully aligned the magnetic axis of hcp-CoCrPt alloys with the plasmonic materials.
- Optimized the magnetic and plasmonic properties of films by reducing the interlayer thickness, resulting in strong perpendicular magnetic anisotropy that met the stringent requirements of ultrafast magneto-photonic devices.
- Accomplished an academic paper as first author on Optical Materials Express.

EDUCATION

General Assembly
Software Engineering Immersive Nov. 2022 - May. 2023 (Expected)

University of Pennsylvania, Philadelphia, PA
Master in Computer and Information Technology (GPA 4.00/4.00) Aug. 2022 - May. 2024 (Expected)
Relevant coursework: • Introduction to Software Development, • Mathematical Foundations of Computer Science

Purdue University, West Lafayette, IN
Master of Science in Materials Engineering (GPA 3.84/4.00) Graduated 2020
Relevant coursework: • Data Engineering I and II