Alice McGregor

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Website I'm building using React to spread knowledge on web accessibility

Tech Stack

React | TypeScript | JavaScript | Emotion CSS | Accessible HTML | Jest | Npm | Storybook C# | .NET Core | Rest APIs | xUnit | SQL | Azure | Git | CI/CD | Agile | TDD & BDD NVDA | VoiceOver | Axe Dev Tools | Voice Control Software | Tobii Eye Gaze | Aria | WCAG

Employment

Contract full-stack developer, Rebalance Earth, MicroSoft Hackathon, July 2023

- Suggested, explained and set up suitable Azure architecture for an MVP of an ecosystem prediction model which would be scalable and performant
- Created a serverless API in the form of Azure functions for clients to upload geospatial data to a Cosmos database
- Integrated Power BI, ArcGIS maps and Azure Fabric data to create a dashboard where users could select rivers to restore and view the result on the ecosystem

Contract front-end developer, Mahlia Amatina Neurodivergent Art & Advocacy, June 2023

- Designed and built, using clean coding principles, an interactive map using React, TypeScript and Leaflet.js to creatively display 80 photos and stories that an artist collected from people around the world
- Researched different mapping libraries and tools which could be used create that map, and gave my recommendation to the client in layman's terms
- Audited the Leaflet.js mapping tool used against the Web Content Accessibility Guidelines (2.1) and wrapped custom code around certain problematic areas
- Set up GitHub and a CI/CD pipeline using Netlify for the client so that
 - 1) The setup was simple enough that the client could make changes themselves in future and
 - 2) I could push frequent updates and tweak the product based off her feedback and ideas

Contract full-stack developer, Crover, June 2023

- Fixed 2d and 3d Plotly graphs which were showing nonsensical temperature and moisture data by tweaking the data retrieved from an API into a more suitable format
- Identified a large security issue in the form of unprotected URLs and endpoints and subsequently hid these behind authorisation requirements
- Advised the company's permanent developer on how to better architect a large project by favouring reusable code to improve maintainability, readability and reduce bugs
- Reviewed the company's Agile workflow; suggested an 'In review' column may be a good addition to their Scrum board as they frequently made notes on quite old tickets that were in the 'Done' column and moved them back, which disrupted the flow of work

<u>Senior full-stack developer, OpenMoney, 2019 - 2023</u>

- Led a front-end project
 - created a dashboard, using React and Typescript, where customers could locate their mortgage and investment products
 - gathered data by calling internal Rest APIs built using a microservices architecture to build out customer profile pages

- guided colleagues who were unfamiliar with React and explained concepts like two-way data binding and state management via pair programming, having in depth conversations on PRs and discussing the team's progress in Agile retrospective meetings
- o impressed the importance of testing, clean code with readable functions and consistency, and responsive design implementation
- Worked as a full stack developer in several teams
 - o built an online mortgage application and two onboarding journeys using React, .NET Core, Azure and SQL
 - o used third party APIs to retrieve personalised mortgage recommendations from a variety of lenders
 - o researched and coded a mathematical algorithm which was a key feature of the mortgage product
 - o created a restricted area for financial advisors to manage applications
 - o helped set up and maintain a shared component library
 - pair programmed with other developers to tackle errors caught in Azure application insights and develop complex features
 - mentored an apprentice
 - actively participated in discussions with developers, designers, testers and product owners to plan new features
- Successfully advocated for improved accessibility
 - presented a well-received pitch to all members of the company about the importance of accessibility, which led to tangible changes within the company and noticeable differences in attitudes towards accessibility
 - audited several of our projects against the WCAG 2.1 Level A and Level AA
 - o documented new accessibility acceptance criteria for PRs and QA going forward
 - o proposed a plan to retroactively improve the accessibility of existing projects
 - held sessions showing how to manually test keyboard accessibility
 - held sessions to show the basics of how to use a screen reader on a desktop and a phone
 - o integrated automated testing tools into the workflow
 - worked with designers on beginning to implement an accessibility annotation kit in Figma to shift some of the responsibility left, with the intention of reducing accessibility issues and saving time on fixes

Freelance web developer, 2018 - 2019

- Programmed an interactive graph using the Plotly library in the form of a silo (a tall container on a farm) using mathematical equations
- Used the Google Sheets API to extract and manipulate housing data and created a user-friendly interface to run a machine learning recommendation algorithm on said data

Education

Informatics MSc (machine learning programming and theory) Mathematics BSc