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## CRISTON MASCARENHAS

[crstnmac \(Criston Mascarenhas\) · GitHub](#) | <https://github.com/bbcriston> | Portfolio: <https://criston.dev>

### SKILLS

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- Programming Languages: JavaScript, Typescript, HTML, CSS, SQL
- Frameworks & Libraries: TailwindCSS, React-Native, React, NodeJS, Postgresql, Vite, DrizzleORM, Prisma

### EMPLOYMENT

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#### Senior Software Engineer, Full-time, BarrierBreak, Nov 2023-Present

Barrierbreak([barrierbreak.com](https://barrierbreak.com))

- Developed an accessibility checking engine for Chrome and also as an api, yielding 25% more accurate results than axe-core library. ([extension-link](#))
- Built a full-stack web application that automates testing and compliance monitoring for web applications([web-app-link](#))
- Built a robust retry mechanism for failed scans with exponential backoff.
- Developed algorithms to compare scan results and track issue evolution over time.
- Technologies: Typescript, React, Vite, AWS, TailwindCSS, PostgreSQL, Node, Prisma ORM, Express, [D3.js](#), OAuth, Github Actions
- Created a user impersonation feature for debugging production issues.
- Created a PDF-library to create tagged PDF's

#### Frontend Engineer, Full-time, Timeless Ventures, Oct 2022-Oct 2023

Timelss.co([timeless.co](https://timeless.co))

- Developed and maintained React-Native components, screens and features for the mobile app.
- Participated in design discussions regarding application architecture, feature implementation, or any other relevant topic as required.
- Technologies: Typescript, React, React Native, NextJS & TailwindCSS.

#### Software Engineer, Full-time, GlobalLogic, March 2021-Sep 2022

Globallogic([globallogic.com](https://globallogic.com)) Project ->Global Healthcare Exchange([GHX](#))

- Worked on developing a responsive user interface for a healthcare supply chain management system with several sophisticated features.
- Participated in design talks with other developers and the dev lead in order to come up with the best solution for the requirements at hand.
- Technologies: Java, Angular, Spring boot, Typescript, JavaScript, MongoDB, Elastic-Search, MySql, and SASS.

#### Frontend Developer, Intern, SlashRTC, July 2019-Aug 2019

SlashRTC([www.slashrtc.com](https://www.slashrtc.com))

### Education

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**B.E in CSE, Vivekananda College of Engineering and Technology, June 2016-Sep 2020**

### PROJECT WORKS

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- AlllyInspect (<https://allyinspect.barrierbreak.net>) Creator / Lead Engineer
  - AlllyInspect — Web Accessibility Testing Tool
  - Designed and built AlllyInspect, a browser-based web accessibility testing tool used to identify WCAG compliance issues directly in live web pages
  - Implemented automated accessibility rules engine covering WCAG 2.x success criteria, combining DOM analysis, ARIA validation, and visual checks

- Built in-page inspection & code-highlighting system to map accessibility issues back to exact DOM nodes and source code
- Developed visual testing utilities (heading structure, tab order, color contrast, target size checks) to support manual and semi-automated audits
- Optimized scans for performance to run efficiently on complex, production-scale web applications
- Collaborated with accessibility experts to validate rules and ensure real-world assistive-technology compatibility
  
- AllyNow (<https://allynow.barrierbreak.net>) Creator / Lead Engineer
  - AllyNow — Automated Accessibility Engine
  - Built a browser-driven accessibility engine using DOM traversal, computed style analysis, ARIA validation, and interaction simulation
  - Implemented rule evaluation framework supporting extensible checks and versioned WCAG mappings
  - Designed data models for issues, pages, scans, and historical trend analysis
  - Integrated automation with manual accessibility workflows, enabling human validation on top of machine findings
  
- AdaptUI <https://github.com/adaptui/react-native-tailwind>
  - Collection of components that are accessible, composable, customizable from low level to build your own UI & Design System

For more projects visit my personal website- <https://criston.dev>