

Site: <https://jamiedorst.github.io/mahjong>

Repo: <https://github.com/jamiedorst/mahjong>

Part 1

The purpose of my website is to teach people how to play MCR Mahjong. The game has a steep learning curve, and it can be hard to find straightforward information about it online given that there are so many variations of the game. Additionally, most online information about the game is written in Chinese, making it harder for those who don't read it to learn.

My website informs people about the background of the game, as well as the rules, gameplay, and how to win. Additionally, I provide learning resources that help people memorize fan, which are essential to game strategy. I also provide access to a hand quiz, so players can practice what they've learned.

My website is interesting and engaging especially compared to other mahjong-related websites due to its UI and its interactivity. Currently, the most straightforward way to learn the rules of mahjong are through PDFs containing the official rulesets. These are not interactive at all, and can be difficult to follow due to their very formal language. My fan guide helps make it easier for people to learn them, by grouping them and having them be filterable.

My target audience is anyone who is interested in playing mahjong. This could range from total beginners who have never heard of the game, to people who know how to play and just need to brush up on the rules. The way I have broken down the site into different chunks makes it easy for those with different starting points to go to the section that they need to learn about.

Part 2:

Learn about the game of Mahjong

- Open website
- Read info on first page

Start learning the rules of Mahjong

- From landing, click "Get Started" button to go to "Mahjong Tiles" or use the navbar to navigate to any "Learn" page

Navigate through instructions

- Click the desired section in the navbar, or use the "Next" and "Back" buttons at the bottom of every "Learn" page

Learn about Fan

- From Winning page, click "View Resources" button, or use navbar to go to "Fan Guide"

- Click the green filter buttons to change which Fan are displayed, to help chunk them for memorization or understanding

Download a printable Fan guide

- Click "Printable Guide" in the navbar
- Click "Download Printable Guide"

Practice Fan recognition with the Fan Quiz

- Click "Fan Quiz" in the navbar
- Adjust any sliders or buttons to customize the difficulty
- Click "Start"
- Type the number of points you think the hand shown is
- Click "Check" and see how your ratio changes on the right

Part 3:

I built my website using React, and three other JavaScript packages: React Router, a Dark Mode Reader wrapper, and a Scroll to Top function.

I chose to use React because the use of components would allow me to streamline my code. React Router pairs well with it and makes it simpler to navigate through my different pages, and the Scroll to Top and Dark Mode packages helped to make the user experience of my website better by automatically dimming brightness along with the computer preference, and not forcing users to have to scroll every time they load a new page.

I used React's state to be able to dynamically change my collapsible navbar and which Fan are displayed based on the filters, and I used components for my Fan Guide to display each similar but different Fan. React Router was used to connect my pages, and the Scroller is implemented on each page to bring the user to the top. The Dark Mode package follows the user's computer preference to display either the light or dark version of the site.

React enabled me to streamline my code, which for users, ends up making it faster to load and consistent. Scroll to Top makes the user experience more enjoyable as they are never dropped in the middle of an instruction page, which would be confusing. The Dark Mode wrapper is another user experience improvement, allowing users to enjoy the site even at night without it being so bright.

Part 4:

Overall, my site is very similar to my mockups. The main change is how I implemented the quiz, as I tried for a very long time to actually code in the rules of the game or find an API with the rules, but found that they were far too complex for me to be able to do within the scope of the

project. I did not want to hardcode in fan for the quiz as that would make it predictable and therefore not useful, so I opted to embed another quiz instead.

Part 5:

I had a hard time figuring out the best way to organize my Fan code, as I wanted to use components and make them filterable, but was attempting to do so without state. I also had trouble implementing my collapsible navbar, as I again was trying to do it without state and just change it based on screen size and a button click. I also had trouble with Github Pages, as it isn't meant to host single page applications, so when I reloaded anything but my landing page, it would return a 404 error until I implemented a known workaround. Finally, I struggled a lot trying to build out a custom quiz by coding in all of the actual mahjong rules, but found that it was far too complex for someone who doesn't actually know how to code at all and probably should not have been in section E in the first place.

WAVE:

The image shows three panels from the WAVE accessibility tool. The 'Summary' panel on the left provides an overview: 0 Errors, 2 Alerts, 11 Structural Elements, 0 Contrast Errors, 1 Feature, and 1 ARIA. A message at the bottom states: 'Congratulations! No errors were detected! Manual testing is still necessary to ensure compliance and optimal accessibility.' The 'Details' panel in the center lists specific issues: 2 Alerts (1 Skipped heading level, 1 Noscript element), 1 Feature (1 Language), 11 Structural Elements (1 X Heading level 1, 6 X Heading level 2, 1 X Heading level 3, 1 X Unordered list, 1 X Header, 1 X Navigation), and 1 ARIA (1 X ARIA). The 'Structure' panel on the right shows the document's DOM tree, including the Header, Navigation menu (Home*aria-current='page'*, Learn, Resources), and the main content area starting with 'Mahjong Mastery' and 'Welcome to the Mahjong'.