Viability Document: MERN Stack vs WordPress

The aim of this document is to research and evaluate the viability of two technologies (WordPress vs MERN stack) for the purpose of building/developing a website for the Fortify Project.

# Shravan Kumar–

WordPress will allow to build the basic website very fast. In addition to that, we can add many functionalities (forms, email lists, etc.) as plug-ins. and modify the nitty gritties with PHP/HTML. This process is something ALL of us are familiar with and will allow us to deliver a lot more than just a couple basic webpages over the trimester. Plus, we know we can edit a lot of aspects using CSS etc.

MERN stack is a very robust set of technologies that will allow us to build a website as good as our imagination allows us. We can incorporate whatever we want into it (including the secure coding practices) and use any API's for added functionality. Once we familiarize ourselves with JavaScript, it will make it easier to build and contribute to it.

**WordPress -**

Pro's

1. One of the best User-friendly CMS (content management System). Easy to navigate platform
2. Will allow us to deliver a lot more and at a faster pace.
3. Around 54,000 plug-ins. (mostly free ones) which means any feature we want on the website; a plug-in should exist for it.
4. Security - It is a world leading platform so its security good. (Double edged sword)

Cons

1. Security - it is an open-source platform and extremely popular. Therefore, is prone to attacks.
2. because of point 1, frequent updates are rolled out. Many times, an update brings some issues with the website. In that case we revert to older versions.
3. We will not get as much coding experience in using the platform as it aims to simplify the web building process.

**MERN Stack**

Pro's

1. Robust set of platforms that work very well with each other.
2. Freedom to control every aspect of our website.
3. Predominantly based only on one language (JavaScript). So, once we learn it, dev becomes easier.

Con's

1. Must do everything from scratch.
2. Might take newcomers time to start making significant contributions. (In future trimesters, the progress might be slow as people might take time to familiarize themselves with the tech.
3. Security - due to point one, the website may be vulnerable

**Opinion -**

As much as WordPress is easier to start deployment on. It will be hard to achieve the Figma Designs that have been done over the past trimesters. **I believe MERN would be suitable for our purpose** despite more work and high skill requirement as it will allow student who aim for high grades contribute more technically. In addition to this, I believe future employers will value work done with MERN more than development using WordPress.

# Paulina –

# Tom Edmondson –

# Harry Singh –

# WordPress

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| PROs | CONs |
| -Most Userfriendly CMS  -WordPress is mobile ready  - 1000s of custom-made themes and plugins to choose from  -Website can be accessed from anywhere  -Easy to edit and we all have some experience from 1st year as we all have used it.  -it is also easier for us to work in a team as it's all done online, we can assign each of us a admins and see what all of us doing are at the same time. | -Not very secure as it relies on plugins developed by different people it becomes a very easy to target for the cybercriminal.  -Not enough coding will be used as most of it is premade. |

# MERN Stack

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| PROs | CONs |
| -Using only JavaScript (focus on one language). -We can design the website however we want as its from scratch not a premade theme. | -Not Time Efficient as everything must be done from scratch including the design. -can also become hard to find if make some mistakes during coding.  -not secure too until unless we research more on secure coding and use that |

# Abigail Chong

## WordPress

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| PROs | CONs |
| * Time Efficient – fit more to our timeframe * Just have to edit the code to fit our design * Built in Backend * User Friendly * Mobile Friendly * Simple to navigate, easier for next team to pick up * Has many plugins that is of use to us * Thousands of website themes * Access website from anywhere | * Designs may be similar to other websites, may not be able to make it exactly like the pre planned designs on Figma * Less technical work – not sure if it will be acceptable by the unit chair * Open sourced so it can be vulnerable * Slow load times due to unnecessary codes * Frequent updates that may effect compatibility of functions utilised |

## MERN Stack

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| PROs | CONs |
| * More technical work, hands on * More freedom to the design and functionality aspects * Uses only one language - JavaScript | * Time Consuming – doing, everything from scratch, does not fit our timeline * Also have to create a back end which not many of us have the knowledge of * May be hard for the next team to catch on |

# Ali –

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| WordPress | React.js |
| WordPress has a much higher vulnerability to security threats. | React.js is much more secure. |
| WordPress is extremely User- Friendly. | Rigid design leads to lower user accessibility |
| Lack of diverse themes and design options leads to repetitive appearance. | React.js has a wide assortment of design options. |
| Insignificant, blanket code leads to slow processing speeds. | Applications developed on React.js have faster performance. |
| WordPress does not require any additional modules or libraries to be fully operational. | React.js requires additional modules or libraries to be fully operational. |
| WordPress requires frequent updates to be functional. | React.js does not require updates to be operational |
| Applications and content developed with WordPress are known to have a severe lack of scalability. | Applications and content developed with React.js are much more scalable. |

# David Wang –

# Nadia –

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| Wordpress | MERN |
| Has no default security features | Data can be made confidential and secured |
| Websites are slower and more glitchy | Can handle heavy elements and requests without showing lag or glitch to users |
| Code is not reusable | Code can be interchanged and reused on other websites or frameworks (Good for longterm use) |
| Has templates and plugins | Must be built from scratch |
| Simple installation | Installation is complicated, requires beforehand knowledge |
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Beatrice –

My honest opinion I think we should go for the MERN Stack as it will be easier to get the Ds and HDs, we can show upskilling and codes as well. also, the last trimester handover was to use MERN stack (I could be wrong), don't you think we will be deviating from that. I also find that for the designs, WordPress we will have to get templates that is similar and work with that, so what has been done or what Nadia is currently doing will be pointless, with MERN we will have flexibility of the designs. Because this is something that the other trimesters will come and continue with i.e., it's a big project then MERN stack will be appropriate. The pros outlined here are more than WordPress, my thoughts though