**Applied research**

**1. Problem definition**

Front end of a food delivery application

**2. Main question**

Which front end JavaScript framework is suitable for a food delivery application and how can this contribute to efficiency ?

**3. Sub questions**

Which JavaScript framework is easy to learn ?

Which JavaScript framework offers reusable components ?

Which JavaScript framework has good documentation/open-source code ?

**4. Research methods**

Available product analysis is being used as a research method to find out if similar projects have been done by someone else.

The competitive analysis research method is used to find the best solution between the competitors.

Problem analysis is being used to help understand the problem and to make sure that it is not solving the wrong problem.

Literature study is used to find general information, guidance and best practices.

Using the data analytics method, insights are gained by measuring data.

Observation will be used as a research method to gain knowledge about how users interact with a similar product.

**5. Answering sub questions**

* Which JavaScript framework is easy to learn ?

The *problem analysis* research method helps understand the problem, which in this case is to build a responsive and interactive food delivery website. In order to build this website in a restricted amount of time, finding a JavaScript framework that is easy to learn is an important characteristic, thus it was found that React is one of the simplest frameworks to learn and work with because only foundational knowledge in JavaScript is required in order to start building an interface.

(Noble Desktop, https://www.nobledesktop.com/learn/react/how-difficult-is-it-to-learn-react)

With the help of the *competitive analysis* research method, it was found that React, Vue and Angular are currently the best JavaScript frameworks because of the amount of usage and because of the big platforms that run with the help of these frameworks, such as: Facebook, Airbnb and Netflix, which are using React. When comparing React to Angular, React is easier to learn and to use. The main advantage of Angular in this comparison is that it is more performant, but at the cost of a steep learning curve, which is not recommended for this project’s goal. Vue is also a great JavaScript framework that is easy to use and offers almost the same performance as React, but one of it’s disadvantages is that it doesn’t have that big of a community compared to React, which means that there are less updates and features available, and also less developers that use it.

(Technostacks, <https://technostacks.com/blog/best-javascript-frameworks/>, <https://technostacks.com/blog/react-vs-angular/>, https://technostacks.com/blog/react-vs-vue/)

* Which JavaScript framework offers reusable components ?

The *literature study* research method was used to study react features, and it was found that a strong characteristic of React is components, which contain their own controls and logic, manage their own state and are very reusable in order to make complex UIs.

(React, https://reactjs.org/)

Using the *available product analysis* research method in order to find out similar projects, more specifically websites that are built with React, it was found that a lot of platforms that are popular today are indeed built using React as their JavaScript framework, for example: Facebook, Airbnb and Netflix. All of these websites use reusable components such as: posts on Facebook, series on Netflix, rooms on Airbnb etc.

(Medium, <https://medium.com/@coderacademy/32-sites-built-with-reactjs-172e3a4bed81>)

* Which JavaScript framework has good documentation/open-source code ?

Using the *data analytics* method to measure and analyze data, it was found that there is a massive amount of open source projects in React, even when compared to the other two best frameworks, Angular and Vue, the number of projects being 250000, compared to 40000 with Angular and 45000 with Vue. This amount of open source projects also means that there are a lot more guides and code to look at that can be of help when building a website and being new to the coding environment.

(GitHub, https://github.com/)

With the help of the *observation* research method, it was found that most developers currently prefer and use React in favor of the other JavaScript frameworks. Professional developers that are using React are contributing to updates on new features and fixes, which makes the framework a good choice for a beginner, but also for a professional long-term website.

(Imaginary Cloud, <https://www.imaginarycloud.com/blog/how-to-find-skilled-react-developers/>)

**6. Conclusion**

In conclusion, the task of finding the most suitable JavaScript framework for building a food delivery website is not an easy one because there are many popular framework that each have their pros and cons, but after doing the research, React appears to be the best because of it’s fast learning curve, reusable components, and the amount of open source code that makes it accessible and time efficient.