

# KYLE CHAPMAN

## 3D Web Developer

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### WHO AM I?

I am a diligent, organized, quick learner and an extremely hard-working person who can keep calm under pressure. I enjoy taking on challenging projects as this allows me to grow and better myself as both a developer and a person. I enjoy learning new programming languages as this allows me to be more flexible when developing software. At the present moment, I am interested in learning more about TypeScript and Golang.

### KEY SKILLS

**Languages:** JavaScript, Python, TypeScript, Golang

**Frameworks:** React, Vue, Flask

**Databases:** Neo4j, Firebase

**Other:** three.js (*3D web rendering*), Babylon.js (*3D web rendering*), OpenLayers (*map data for web*), Docker, REST, cURL, Vulkan

### EXPERIENCE

- 02/2021 – present **3D Web Developer** ydangle apps (Pty) Ltd.  
I am currently working as a web developer on a 3D, social website where you can explore user-created worlds or create your own world. My role is to perform code review, release new versions of the platform, add new features, enhance already existing features, fix bugs and write developer documentation. The main systems I am most proud of are: implementing a chat system, implementing editor tools so that users can customize 3D objects within their worlds, and re-writing the core user-interface to make it more user-friendly.  
React / JavaScript (ES6) / Firebase / three.js / Babylon.js
- 12/2019 – 1/2020 **Web Development Internship** VASTech (Pty) Ltd.  
I worked on a visualization for geospatial data using OpenLayers, which allowed a user to interact with a map of the world. Various data points could be plotted and played around with in order to visualize specific elements of the data points. I learnt a lot about Vue as a whole, how to integrate OpenLayers with Vue and all the quirks of TypeScript development.  
Vue.js / TypeScript / OpenLayers
- 6/2019 – 7/2019 **Python Internship** VASTech (Pty) Ltd.  
I worked on a speaker identification program, which took in an audio recording of multiple people speaking and output a separate folder for each speaker in that audio recording. I learnt a lot about the interaction between Python and REST APIs, and how to apply various alterations to audio so that the voices could be separated.  
Python / REST / cURL

### EDUCATION

- 1/2020 – 12/2020 **Bachelor of Science Honours degree in Computer Science (BScHons)** Stellenbosch University  
My honours project was a full-stack website that could host concurrent tournaments relating to the game Othello. I developed the front-end using Vue.js and TypeScript and the backend using Neo4j for the database and Python for the REST API. I wrote a script, in Golang, that analysed the data in the database to check for any updates to the tournaments. If a new tournament was started, the script would set up the necessary Docker containers to host the tournament and persist the result to the database.  
Vue.js / TypeScript / Python / Golang / Docker / REST / Neo4j
- 1/2017 – 12/2019 **Bachelor of Science degree in Computer Science (BSc)** Stellenbosch University  
My undergraduate degree taught me how to work as a team, plan my time effectively and work well under pressure. Over the years, I took various classes on fields such as data structures, algorithms, web development and computer networks, as well as applied mathematics classes in linear algebra, calculus, probability, and statistics.

## INTERESTS

Aside from my passion for software development, I also have a love for travel and exploring new cultures. I believe that travel broadens one's perspectives and helps to foster creativity. I also enjoy keeping up with the latest advancements in the computer science field, so that I can continuously improve my skills.

## PERSONAL PROJECTS

6/2021

### Emoji Set

I wrote a library that simplifies the use of emojis, as well as only showing emojis that are available on all current browsers and operating systems. I noticed that there was no library that existed (at the time) that allowed you to customize the way emojis were returned, such as returning all emojis sorted by their category or keywords, returning just the emoji, or returning information about the emoji (such as name or associated keywords). You can view the source code [here](#).

JavaScript / webpack / GitHub Workflows

1/2021

### Siege Stats Bot

I wrote a Discord bot to view the statistics of any player in the video game Tom Clancy's Rainbow Six Siege. Using the bot, you can view statistics such as current rank, kill/death ratio, win/loss ratio and much more, all shown in a compact and well-formatted way. You can view the source code [here](#).

JavaScript / Discord API

8/2020

### Carbon Engine

I wrote a very basic game engine from scratch in C++ and Vulkan without knowing either of them before starting the project. The goal was to learn as much as possible about both C++ and Vulkan, as well as being able to make something that could potentially be useful to other people. I learnt a lot about how game engines are made and how much needs to be considered to do something as simple as drawing a 2D triangle on the screen. You can view the source code [here](#).

C++ / Vulkan / GLFW / CMake / Travis & Appveyor CI

9/2019

### Personal Website

I wrote a website that can be used as an extension of my CV, which explains a little more about myself on a personal level. The goal was to use my knowledge of web development to create a website where I could showcase what I have to offer and which personal projects I have worked on, as well as learning how to deploy a website so that it is publicly accessible. You can view the source code [here](#).

Vue.js / TypeScript / REST