**ChemAR – Summer 2023**

**Initial Project plan**

**Team Members**

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**Client: Mark Wall**

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**Purpose of Project:**

The purpose of this project is to develop an application that will provide students with an engaging learning experience on molecules. This will be achieved by utilizing augmented reality technology on their phones, allowing them to visualize and interact with 3D models.

**What has been done:**

The teams prior to us have completed the majority of ChemAR, with the exception of the deployment and addition of some desired features and bug fixes. Molecules can be selected, viewed, and manipulated on the screen. There is an admin side to the application so that professors can go in and add molecules to custom scenes and download corresponding QR codes.

**Features to implement:**

We will deploy the application and then regression test the application. This will allow us to identify the bugs which we need to fix. We will also discuss potential additional features once we have gotten the majority of the known bugs fixed.

**Timeline and tools:**

Our goal is to complete the deploy by the first week of June. This leaves us just under two months for feature development and bug fixes. We will be building upon the previous teams’ tools, which are comprised of EJS, Express.js, Node.js, ChemSpider, Three.js, AR.js, WebXr.js, JQuery, Gitlab and Azure.

**Plan for sprints:**

The initial two sprints are focussed on deployment and identifying bugs in the system. The subsequent 3 sprints will be focussed on addressing the bugs, and feature development. Sprints will be completed bi-weekly, with the goal of delivering artifacts at the end of each one.

**Due date:**

We will finish working on the product and deliver a ready-to-use product to the client by August 1st.

**Project risks and management strategies:**

The main risks are around the time it takes for deployment and top address bugs in the system. Deployment is not a straightforward process making it inherently risky. Bug fixes can be costly and break other aspects of the system which were previously functional. We can address this issue by having a dedicated testing environment between production and our local environments.