



*Cornell University Autonomous
Underwater Vehicle Team*

Spring 2017

React and the Webserver

Technical Report

Noel Picinich (nmp53)

May 2, 2017

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1 Introduction

A frequent obstacle encountered by CUAUV electrical and mechanical sub-team members is the need to control the sub or gain access to its various statuses but not being able to do so without the help of a software member. Our current system for driving the sub and performing tests involves having to ssh into the sub and run specific commands. Once the `auv-control-helm` command is run, the user then has to apply knowledge of specific keyboard commands in enabling and directing the sub. This process is often too complex and unfamiliar for non-software members to execute. In a previous semester, Zander Bolgar (`asb322`) implemented a webserver that would ameliorate this problem by providing other subteam members with a central place to perform these tasks. Unfortunately, this webserver was not taken full advantage of because it was not at a comprehensive enough level.

This semester I joined Angela Yang (`aqy2`) and Danny Qiu (`dq29`) in developing a new webserver using React that will solve the aforementioned obstacles and overcome complexity with extremely coherent and user-friendly features. Due to my limited experience in web development and knowledge of React, the bulk of my semester was dedicated to learning React and researching its most effective styles of implementation. This documentation will focus on the understanding I have gained and the React features I was able to implement.

2 Why React?

3 Implementation

3.1 Search Bar

3.2 Keyboard Listeners

4 Conclusion