

## Project Proposal

### Project Proposal: Lab Implementation and Save States

#### Group Members

- Sean Crowley
  - 4th year CS
  - C & Java (Proficient), and Python
- Neal Kurande
  - 4th year CompE
  - JavaScript, C++, C, Java, Python, Matlab
- Camille Bossut
  - 3rd year CS
  - Javascript, C, C++, Java, Python, Matlab

#### Project Goals and Description

##### Problem to Solve/Goals:

We want to save the state of a GUI such that the saved values are unique for a particular state. That way, these saved values can be used to evaluate students during labs. We need a GUI that has finite states we can identify. We will be using the discrete convolution demo that exists already. First we'll finish the discrete convolution demo implementation. From there we can figure out what variables we'll look at when saving a given state. Our final goal is to save these states to a database so that labs can be graded remotely.

##### Potential Issues:

We might have trouble implementing the GUI using JSX graph in the beginning of the project, as well as deciding how to save a state to a database towards the end. In addition, for a given lab assignment there might be multiple correct save states, so autograding assignments might be difficult.

#### Working Plan Chart

<u>Time Schedule</u>	<u>Task</u>	<u>Responsibility</u>
<u>Week 4</u>	<ul style="list-style-type: none"><li>● Brainstorm project</li></ul>	Submit final project proposal draft.

<i>Sept 8 - 14</i>	proposal	
<u>Week 5</u> <i>Sept 15 - 21</i>	<ul style="list-style-type: none"> <li>• Complete final Project Proposal</li> </ul>	Clone repo. Submit final project proposal.
<u>Week 6 - 9</u> <i>Sept 22 - Oct 19</i>	<ul style="list-style-type: none"> <li>• Clean up GUI</li> </ul>	Make sure front end is usable. Ensure it works.
<u>Week 10 - 12</u> <i>Oct 20 - Nov 9</i>	<ul style="list-style-type: none"> <li>• Save states (and replication)</li> </ul>	Identify variables relevant to state. Set up json format to save state. Make sure GUI can be recreated using state.
<u>Week 13 - 15</u> <i>Nov 10 - 30</i>	<ul style="list-style-type: none"> <li>• Database Implementation</li> </ul>	Save data to relevant tables in the ITS database
<u>Week 16</u> <i>Dec 1 - 7</i>	<ul style="list-style-type: none"> <li>• Finalize code</li> <li>• Finish presentation and practice presenting</li> </ul>	Finalize final presentation and present. Merge final code to master.

### Implementation Tools and Resources

- GitHub: <https://github.gatech.edu/VIP-ITS>
- Project Documentation Notebook
- JSXGraph Demos: <http://its.vip.gatech.edu/VIP/demos/>