

### **Accessing MATLAB via the LSU Virtual Lab:**

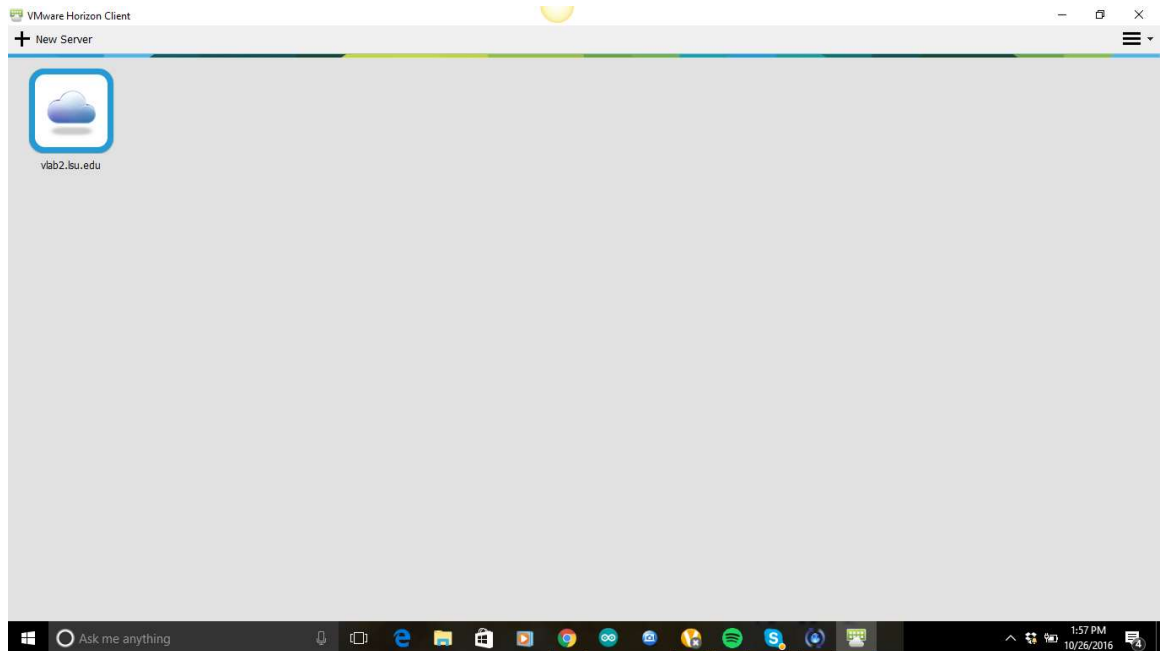
In order to access the LSU Virtual Lab, the user must have an account through LSU (this is often referred to as a PAWS account). The process for opening MATLAB in the Virtual Lab is as follows:

1. Download the VLab client from LSU Tigerware Online
2. Login to the VLab using their PAWS account information
3. Access the “General Desktop”
4. Click on the “Start” button
5. Search for MATLAB
6. Click on “MATLAB R2016a”

### **Using MATLAB to analyze data:**

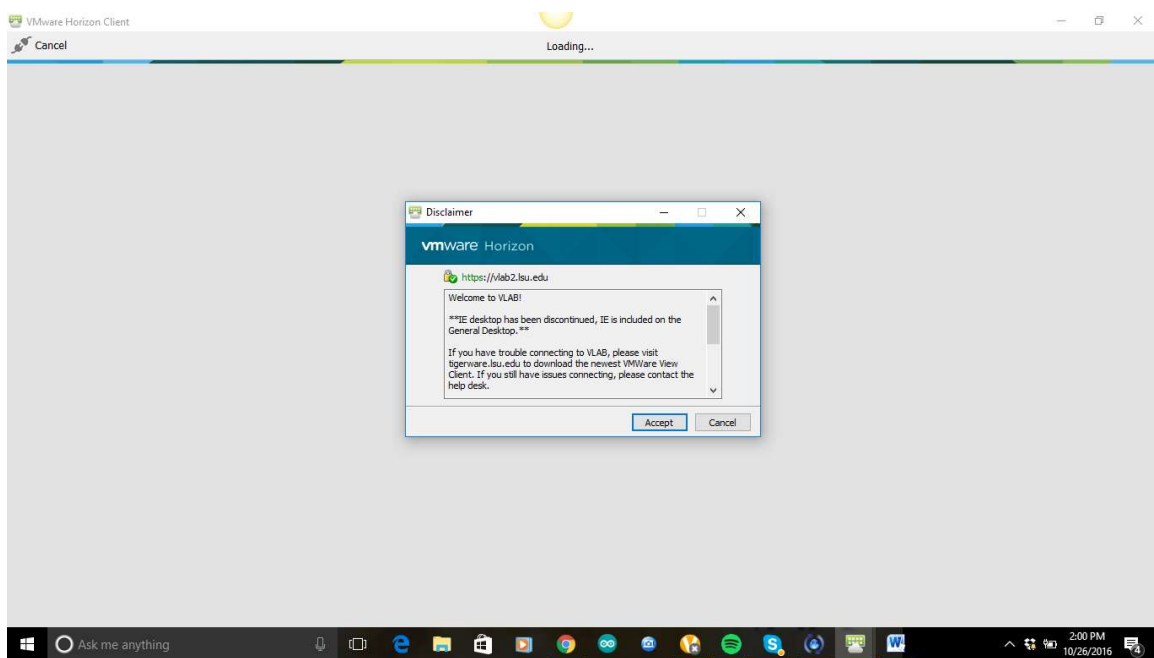
The Fall 2016 team used dropbox.com to store all of the their data/progress. It is HIGHLY recommended that dropbox remains the file-sharing platform. To access data in MATLAB:

1. Enter [www.dropbox.com](http://www.dropbox.com) into the address bar of the internet browser
2. Login using to the Pennington account
3. Go to daily downloads
4. Download this folder to the Virtual Lab desktop (the pathway is SUPER IMPORTANT)
  - i.



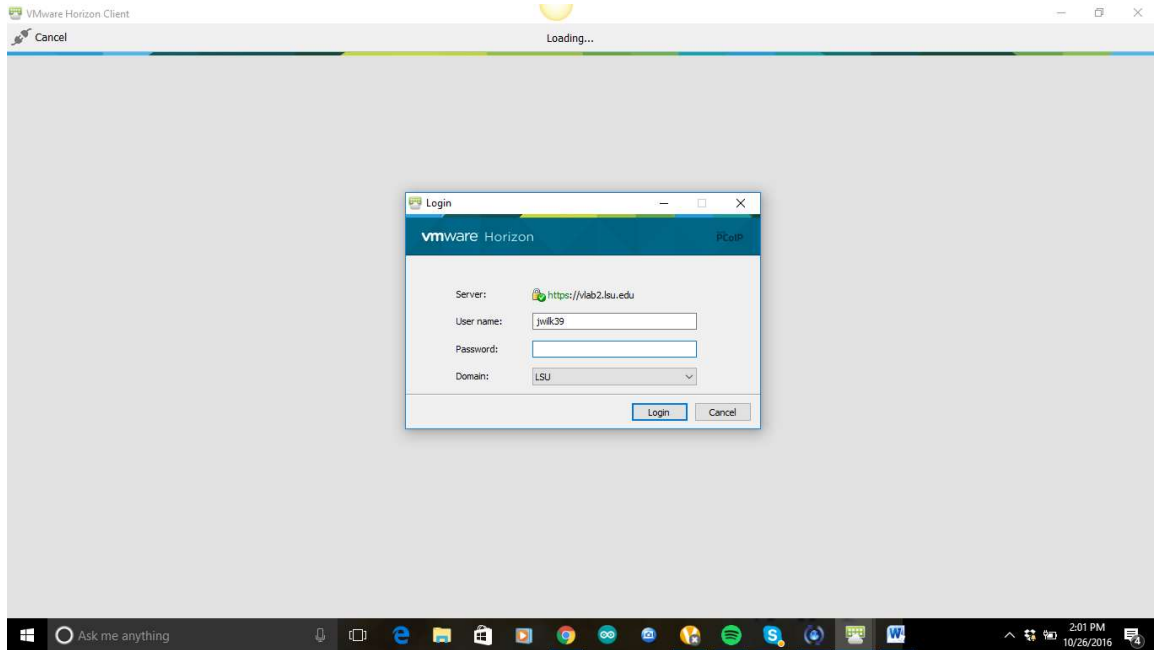
-Click vlab2.lsu.edu

ii.

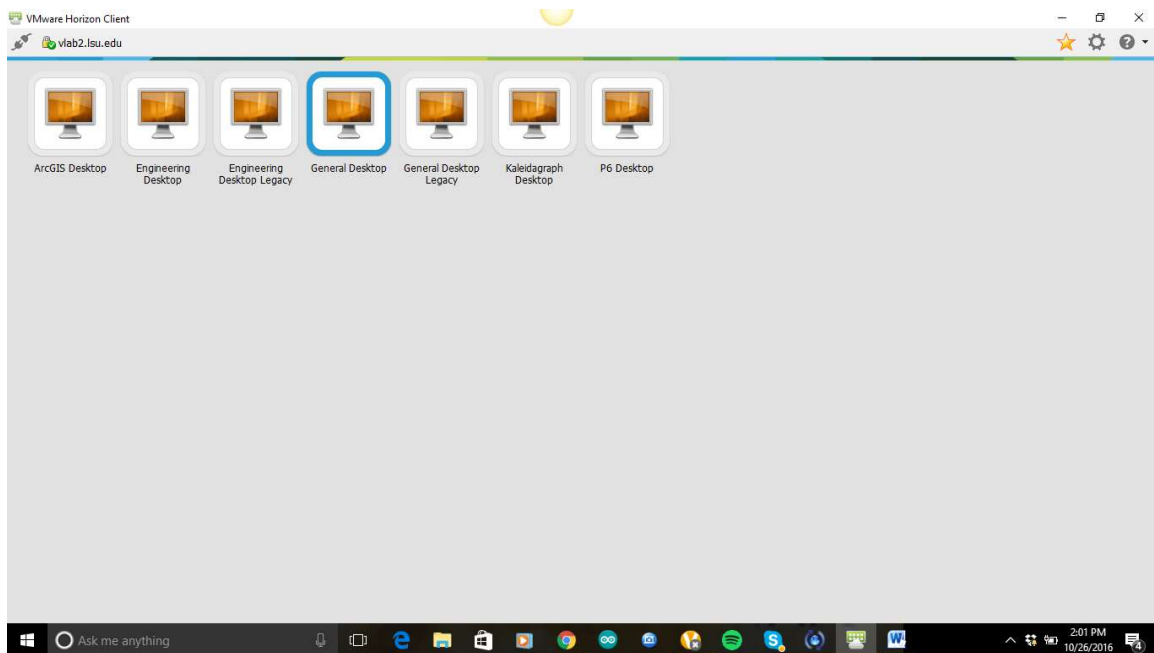


-make sure you click accept

iii.



-use your LSU id name and LSU password to login in to the virtual lab

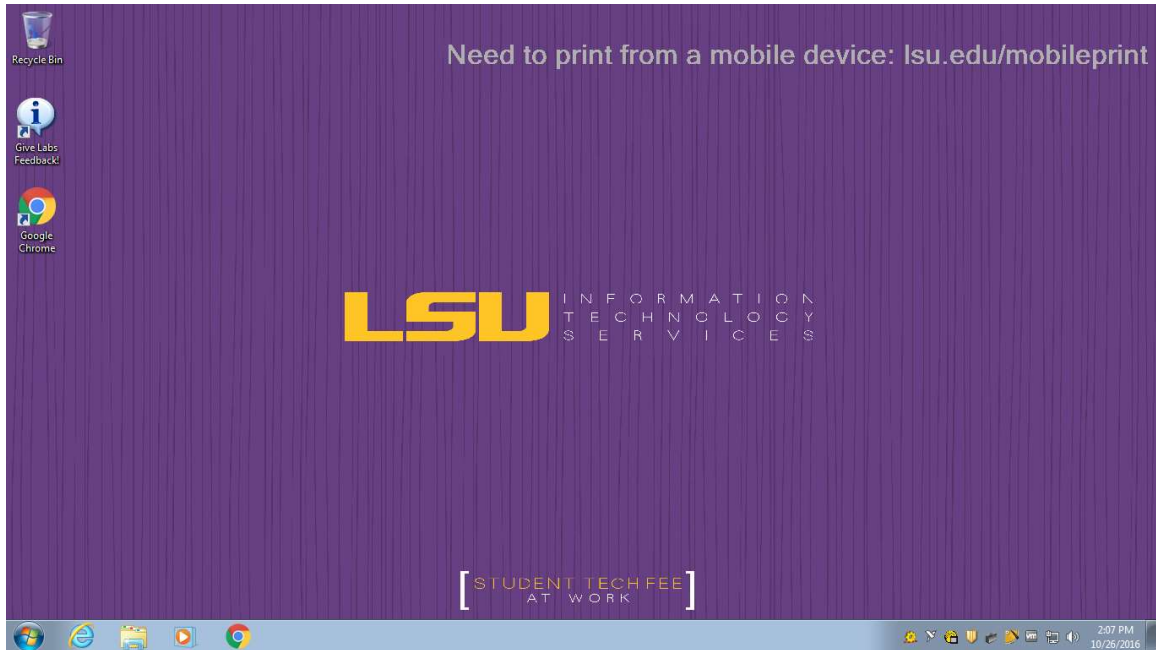


iv.

-choose General Desktop if this server is full then choose General Desktop

Legacy.

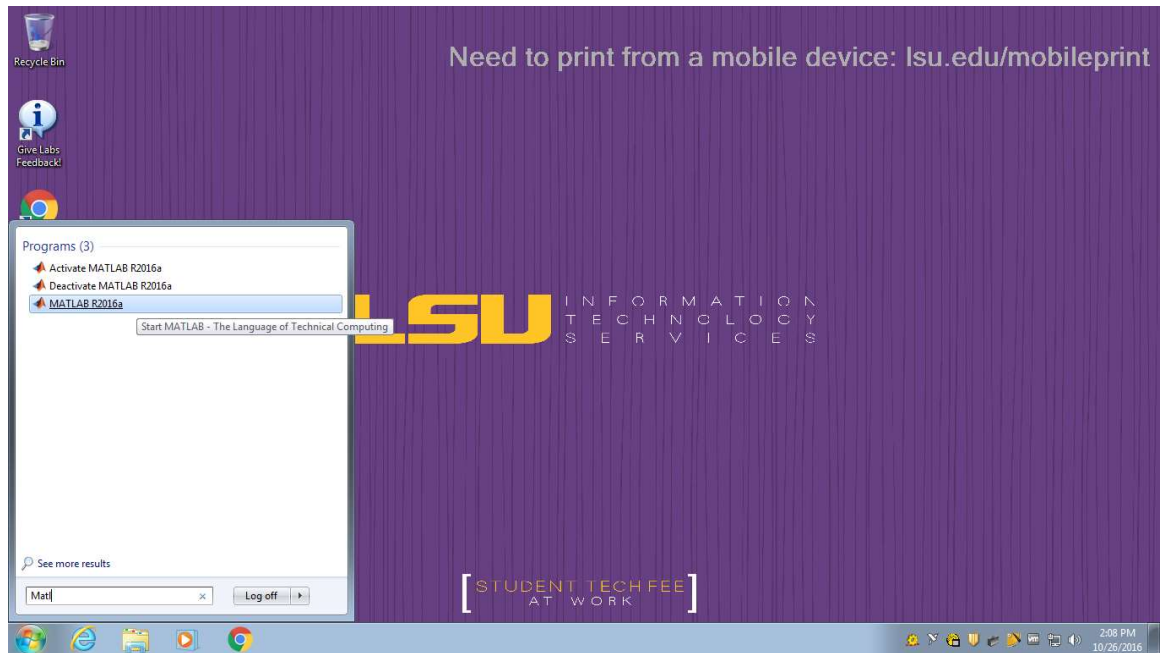
v.



-Volia! We are now in the virtual lab.

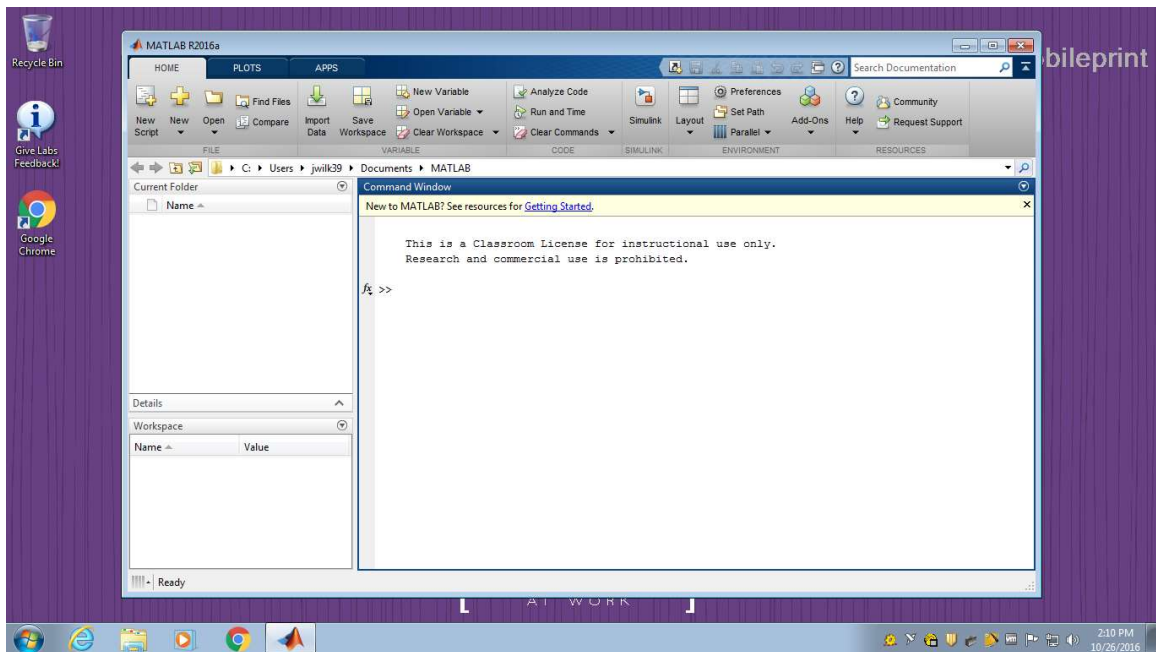
5. Open MATLAB

i.



-Click MatLab R2016a

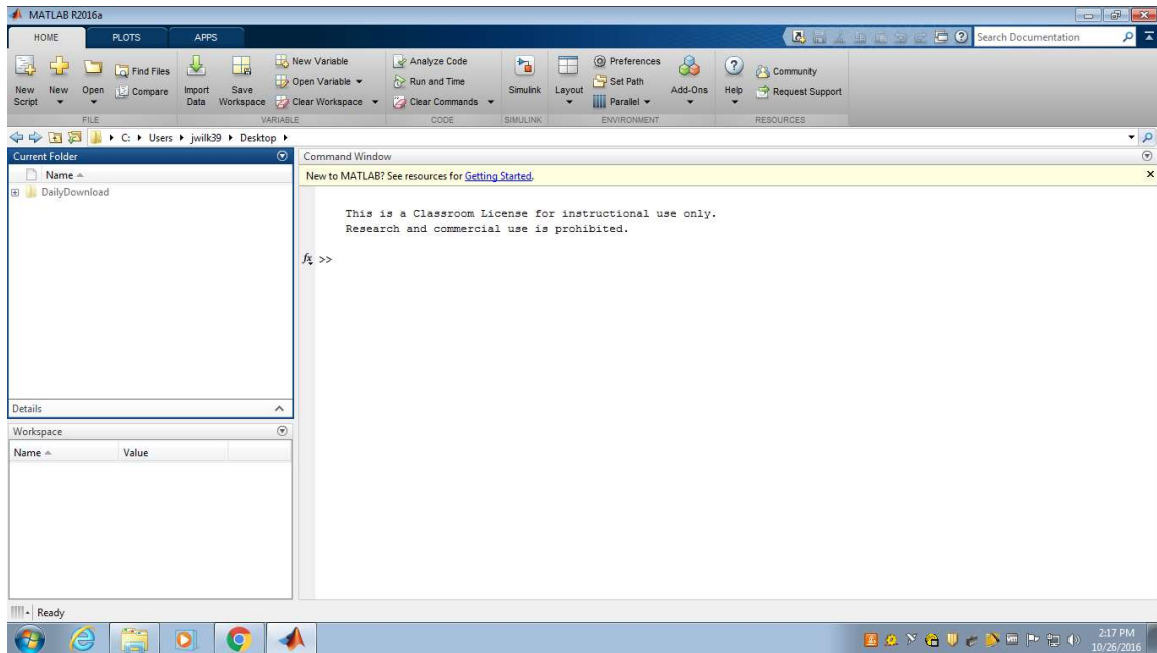
ii.



-Now we are in Matlab, notice the toolbar “user” → Documents.

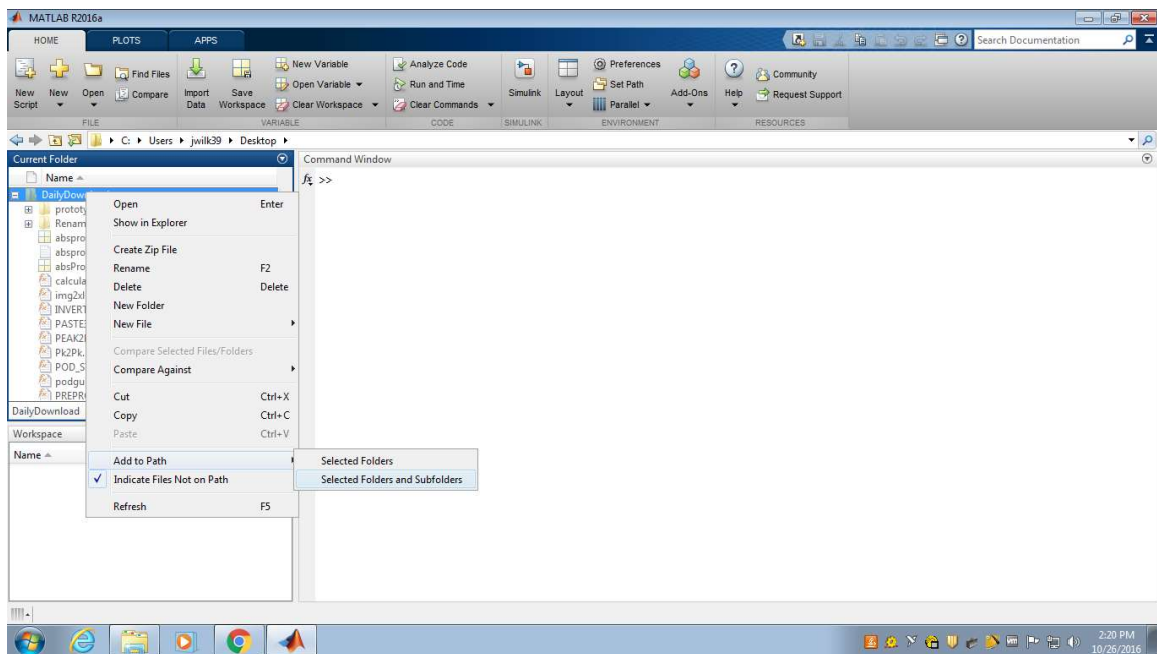
6. Choose the correct pathway to the downloaded files

i.



-First change Documents to Desktop on the toolbox.

ii.



-Click on DailyDownload and add to the Path.

## 7. Begin Data Anaylis

## **Suck Detection Manual**

The Suck Detection Program is designed to perform robust and detailed analysis of a data file generated by the Neonur system while being easy to use. Although you may save the data

that is generated in the form of an Excel file, the program displays all relevant information

completely within the interface of the program.

### **The Interface**

The program's interface consists of three tabs:

**Infant Info**, which contains fields for general information about the infant as well as a text box

for any notes that the user wishes to document. Information recorded in this tab is not used in the

program's analysis

**Params**, which contains a Parameters box of the preset fields for sample rate, correlation coefficient, and cutoff pressure, as well as the "Run Analysis", "Choose Prototype", and "Add

Plot to Excel" buttons. This tab also has a graph for the signal and a single row for summary data

after analysis.

**Data**, which displays the full analysis for each suck detected after the program is executed.

### **Using the Program**

To start, click the open folder icon in the top left corner of the toolbar and select the desired data file. This data file may be anywhere on the user's computer. Once the file has been

selected, the empty graph in the Params tab will display the signal of the data chosen.

At this point, the user may wish to change the preset parameters if it is needed.

Additionally,

the user may wish to choose a different prototype other than the default if necessary. To run the

analysis, press the "Run Analysis" button. The button will then change to "Running..."

Once the

analysis is complete, the graph will change to reflect the signal processing, the calculated baseline, and the detected sucks in the form of dotted red lines. The data row at the bottom will

also fill with the summary data.

The Data tab will also fill with the full analysis of each individual suck detected.

### **Saving the Results**

At this point, the user may wish to save this analysis in the form of an Excel file. To do so,

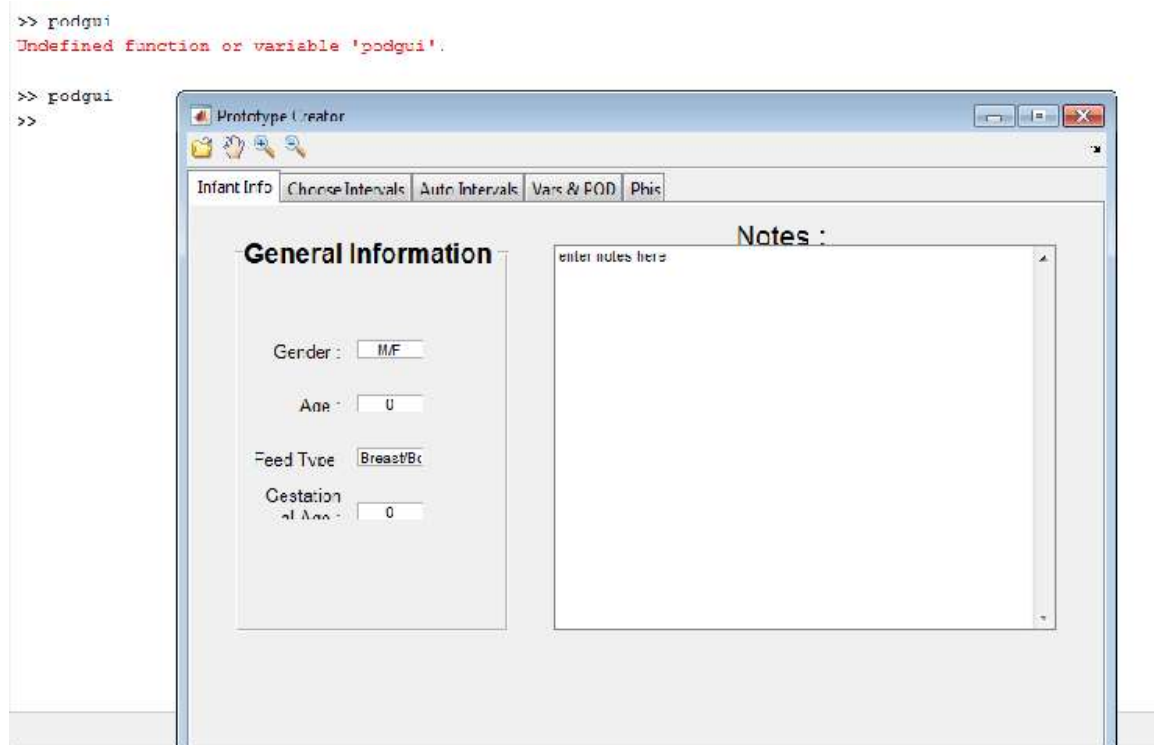
simply click the save icon in the interface's toolbar. The Excel file saved will have two tabs, the

first for the data of each individual detected suck and the second for the summary data.

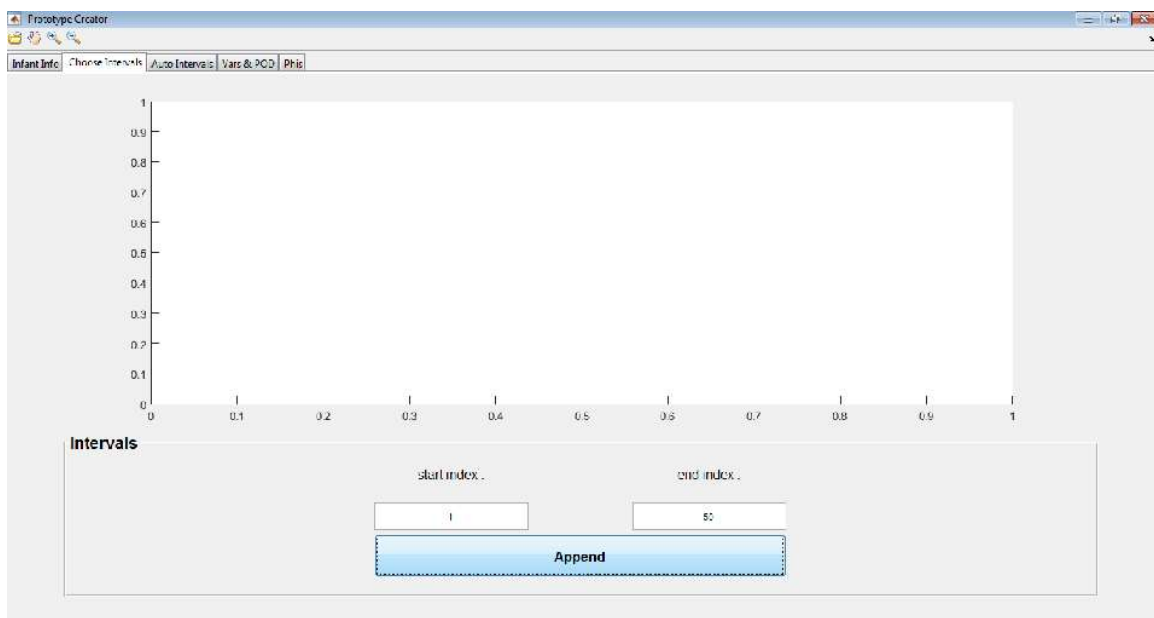
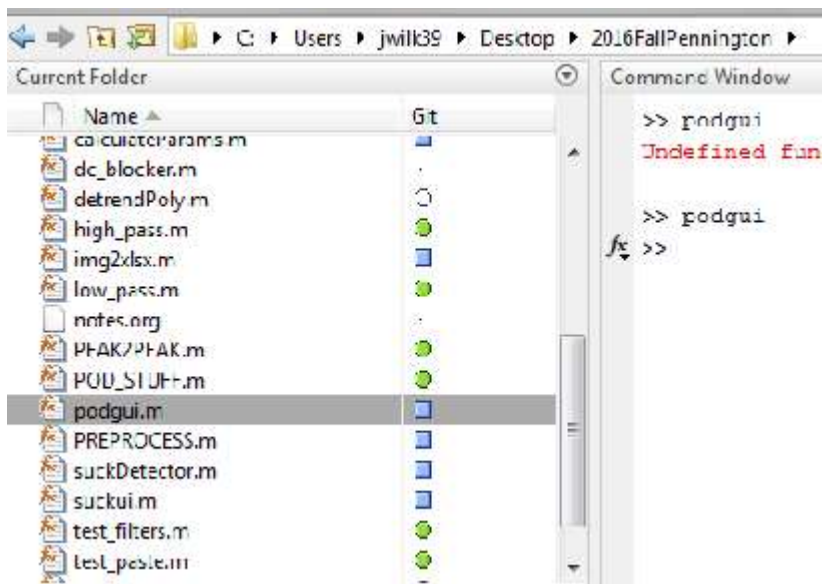
The user may also add the analyzed data plot to a third sheet by clicking the "Add Plot to Excel"

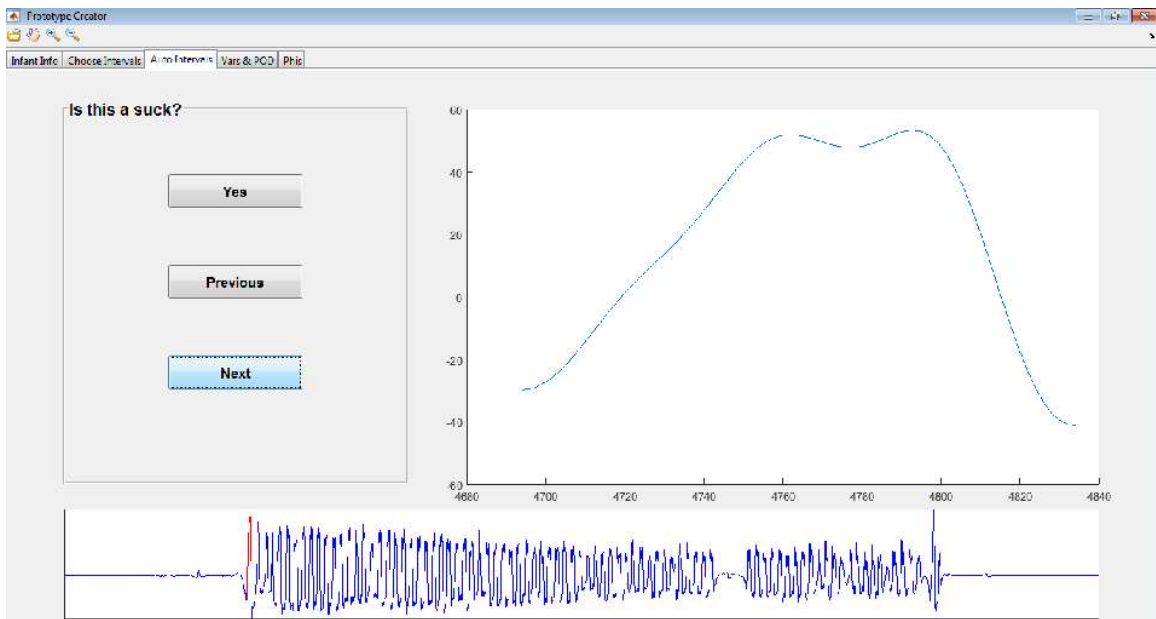
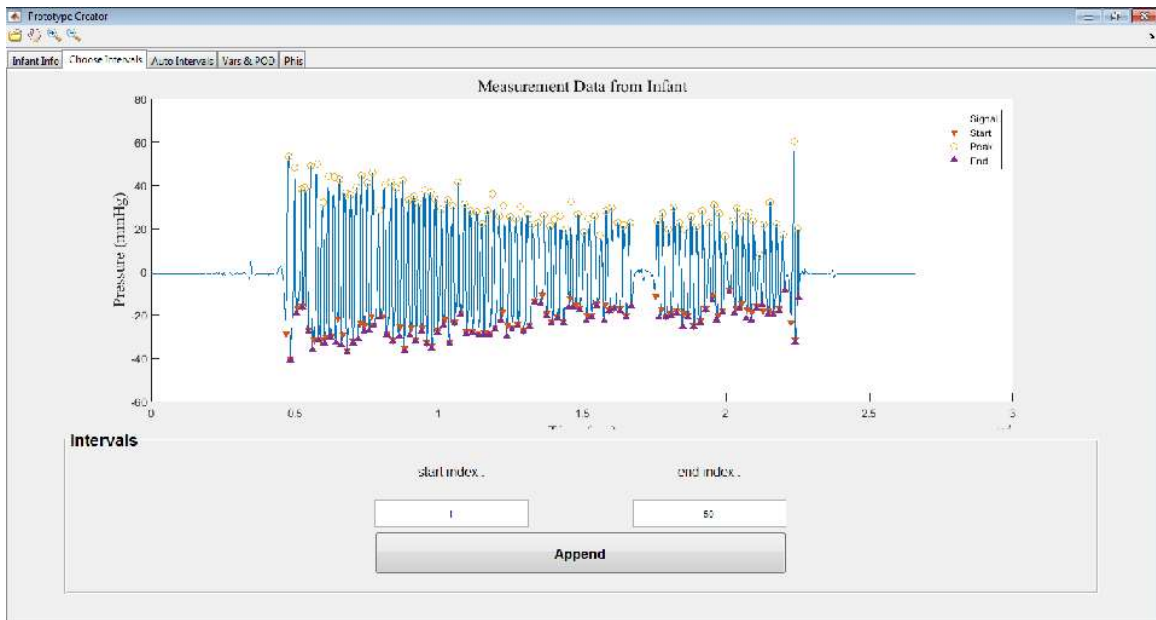
button in the Params tab. After clicking, the plot will appear in this manner:

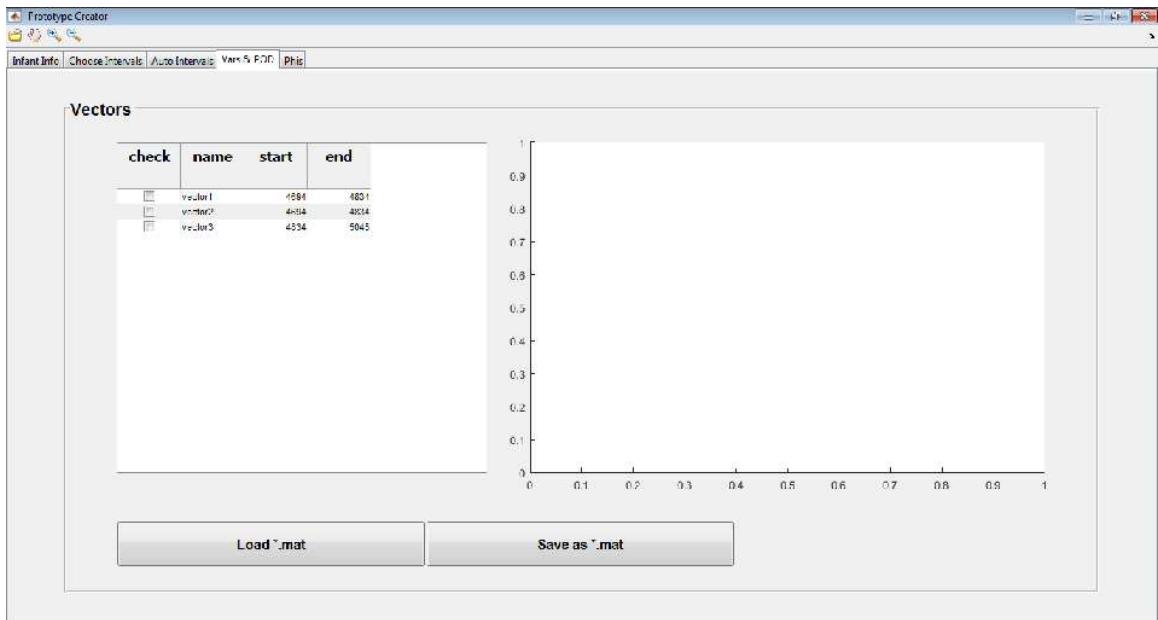
PODGUI: Read in datafile (.txt) through 'Open File' button at the top task bar of PODGUI. From here, select your desired text file. Once it is read in, the file will be loaded into PODGUI. Click on 'choose intervals' to see the data with all of its detected peaks which are the actual sucks. After seeing your data, click on "Auto Intervals" to review each window around the detected sucks. From this point the sucks will either be approved or rejected as a viable prototype. You can still manually create your prototype from a user-selected window; however, this method is not the primary way to create new prototypes.











Prototype Creator

Infant Info | **Choose Intervals** | Auto Intervals | Vars & PCD | Phis

### General Information

Gender :

Age :

Food Type :

Gestational Age :

### Notes :

enter notes here

