

sdmay19-47: NSF Lab furnace control system

Week 9 Report

April 3rd - April 12th

Team MembersAdam Matthews — *Software/Hardware Engineer, Report Manager*Kevin Lang — *Electrical Engineer*Jeremy Hartl — *Hardware Engineer*Christopher Pohlen — *Software Engineer/Gitlab Moderator*Nick Brylski — *Systems Engineer***Advisor/Client**

Dr. Gary Tuttle

Summary of Progress this Report

The settings tab has been added with some simple settings to test the saving component of the temperature and gas settings. The basic settings are saveable to a file. TFT display coding was finished. The display now shows 3 furnaces and 7 mass flow controllers.

We made API functions more robust and added new functions. We began to integrate the API into GUI. We created a section of API for controlling gas flow.

Pending Issues

A few more settings need to be added and more integration with the arduino api. Importantly, the code also will need to be converted to an executable in the future.

PCB parts are taking longer than expected to ship in.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Adam Matthews	<ul style="list-style-type: none">• API work	20	34
Kevin Lang	<ul style="list-style-type: none">• PCB schematic	3	27
Jeremy Hartl	<ul style="list-style-type: none">• GUI development<ul style="list-style-type: none">○ Finalized furnace 2,3, and 4 from completed furnace 1 profiles page○ Implemented profile page into the whole GUI system file	8	39

Christopher Pohlen	<ul style="list-style-type: none">• Added settings tab and added functionality to save settings	10	41
Nick Brylski	<ul style="list-style-type: none">• TFT display coding	8	38

Gitlab Activity Summary

Nothing to report.
