

EE 492: Senior Design II

sddec23-05

DNA Data Storage

Jan. 2023 – Dec. 2023

Client: Professor Meng Lu

Faculty Advisor: Professor Meng Lu

Team Members:

Colin Frank – Software: GUI

Evan Walters – Software: GUI

Rachel San Agustin – Software: GUI & OxyGEN

Caden Wortman – Hardware & Integration: Projector & OxyGEN

Astha Upadhyay – Software: OxyGEN

Anna Hackbarth – Software & Logistics: OxyGEN, Document Management, Website

Week Summary and Updates:

Past Week Accomplishments:

- **Evan – Finished PowerShell script that allows for a fully functioning GUI. Collaboration with fluid group led to further realization of continued work.**
- **Colin – Worked on GUI to finish it, got with Fluid Flow team to get SDK to see how they would interact with each other.**
- **Rachel – Worked with GUI team to plan for GUI & SDK integration**
- **Caden – Ran first photolithography wafer test on UV projector, reviewed results with advisor to decide whether we will need to do another**
- **Astha – Met with the professor to discuss the next steps and setup a meeting to work on the flow cells**
- **Anna – Did logistic planning, website coding (not uploaded), touched based with Fluigent team**

Pending Issues:

- **Evan – Conversion of powershell gui into visual studio to correlate with fluigent sdk.**
- **Colin – Need to rewrite all gui code from powershell to visual studio because for fluid flow only works in visual studio**
- **Rachel – Conversion of powershell GUI into a .NET form application in Visual Studio.**
- **Caden – Need to run second photolithography test utilizing freestanding second lens to adjust intensity and area of the projection**
- **Astha – Supported work with helping SDK**

- **Anna – Spoke with Fluigent team and our SDK will not work in Powershell, so help the GUI team take the necessary steps**

Individual Hours and Contributions:

Name	Tasks (10/11 - 10/25)	Hours	Cumulative Hours (F23)
Evan	Finished GUI, started integration with Fluid Flow	8	39
Colin	Finished GUI, started integration with Fluid Flow	8	33
Rachel		4	14
Caden	Ran wafer photolithography testing on UV Projector, Individual meeting with advisor	10	29.5
Astha	Meeting with the advisor to discuss the steps	2	17.5
Anna	Fluid flow testing, code development, working with Fluigent team regarding integration	10	29.25

Upcoming:

Each team needs to keep making progress and start communicating with each other to start integrating everything together so we can start testing the prototype. GUI team needs to research GUI development in visual studio instead of PowerShell.

Summary of Faculty Advisor Meeting:

Last week Professor Meng only wanted to meet with Fluid Flow team.