
This is my first week in Dr. Martin’s group as as exploratory participant. I started with learning the basics of \LaTeX{} and creating few simple documents in it. Then I wrote my “First” Autobiography in \LaTeX{} providing some details about me and my mathematical background. Next week I plan to explore some more stuff in \LaTeX{}.

2 September 23 - September 29: \LaTeX{} is really cool.

I spent some time on learning some advanced stuff on \LaTeX{} this week. I must say creating documents in \LaTeX{} is really fun!!! I created a document writing a theorem that I learned in Differential Equations subject. I chose this theorem specifically because it involves a lot of mathematical equations\textbackslash{}symbols like $\leq$, integration sign . . . etc. (Attached with this week’s journal). Next week I will start with reading some latest research paper.

3 September 30 - October 06: Started with Python.

This week I was suppose to start reading a research paper but as per Dr. Martin’s suggestion I started learning Python. I could spend very little time
on this one, but thanks to my knowledge of C++ and Java (other Object Oriented Languages) I could quickly complete (rather refresh) some of the concepts. The remaining part, which is mainly learning the syntax of Python will happen as I do more programming in Python.

Next week I will write the code for the nCr problem given by Dr. Martin.

4 October 07 - October 13: Some more of Python.

This week I spent some time on learning the syntax of Python language by writing some small programs. Then I did the nCr program which caches the result for particular values of \((n, r)\) and returns the result from the cache if user enters the same values for \(n\) and \(r\) again.

Next week I will probably learn some more things in Python and start reading the research paper.

5 October 14 - October 20: Mathematical journals take “multiple” readings before they make any sense.

This week I started reading “Approximating a wavefunction as an unconstrained sum of Slater determinants” journal. I just read it but did not understand anything in it :(. I will go through it again this week and see if this time it makes more sense. Also, I did that nCr program using dictionary as per the suggestion.

6 October 21 - October 27: Wave-function formulae list.

This week I spent some time in going through the formulae list related to Approximating a wavefunction, which most probably I will be implementing in Python next quarter.
7 October 28 - November 13: Last couple of weeks of the quarter are really busy!!!

I could not do much related to Dr. Martin’s research as I was busy with presentations, paper readings (lot of them) and final exam preparations for the subjects I have taken this quarter.