Journal of Vittal Pai: Fall 2008

Vittal Pai

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1 September 16 - September 22: My "Mathematical" Autobiography.

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\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.