

# Weekly Report(Feb.19,2018-Mar.4,2018)

Zhang Yuandi

March 4, 2018

## Abstract

In the last two weeks,I have learned the courses of **Linear Algebra:Foundations to Frontiers Notes to LAFF With** and got exposed to **MATLAB**.Besides,I learned how to use **LaTeX**.

## 1 Linear Algebra and MATLAB

The courses I have studied these weeks focusing on using MATLAB to write functions for vectors,like copy,scal,dot,etc.Here are what I have learned from it.

### 1.1 Functions

This copy function is simple.We can just using '=' to copy the elements of vector x to vector y.But by writing a function to do this job,we learned a lot.There are some things need to be paid attention to.First,the size of vectors.If they aren't column or row vectors,or they aren't of the same size,we return 'False'.Then,we just need to classify different cases to copy elements one by one with circulation.

Other functions are as the same,thus there is no need to write them fruitlessly.Nevertheless,what I found very helpful is always to write a program for testing whenever we write a function.If all cases are passed,then we can use the function safely.

### 1.2 Slicing and Dicing

Slicing and Dicing is an important way to do the dot product and axpy.We can partition the vectors into some parts to simplify the operation,but the relevant parts should be of the same size.

### 1.3 MATLAB

This tool is powerful and there are many functions waiting for me to explore.I haven't found where to download the education version for it says there isn't the version in China.But when I sent the email they replied that our school

has the authentic license qualification. Where can I get it? For I haven't embark on the journey of learning it, so I plan to raise questions when I have learned the syntax fully.

## 2 LaTeX

It is an amazing software and I have fun using it. But it is extraordinarily hard for me to use and my first weekly report in it seems terrible. So the problems are so countless that I don't know from where to ask first. The first and basic problem is that WinEdt can't compile for it says the system can't find the file, but the Texworks is operating well, which puzzles me a lot. I will keep on trying by searching for solutions. Then there are some other questions about syntax, but I think I need to solve them by myself through learning more about it in my learning next weeks. Yeah, just keep on trying.

## 3 Plans for next two weeks

I am finding my balance between my courses in school and in lab, and I am trying to make my learning pace more systematic. And in my next two weeks, I plan to :

1. Learn the courses Week02 and Week03 of **Linear Algebra: Foundations to Frontiers Notes to LAFF With**.
2. Keep on exploring LaTeX.
3. Learn the basic syntax of C++.