

Summer of Aaron

Objectives

Learn some:

- linux
- Java
- Python
- Linear algebra
- Adaptive filters
- Databases
- git
- Document

- **linux**

- Java

- Python

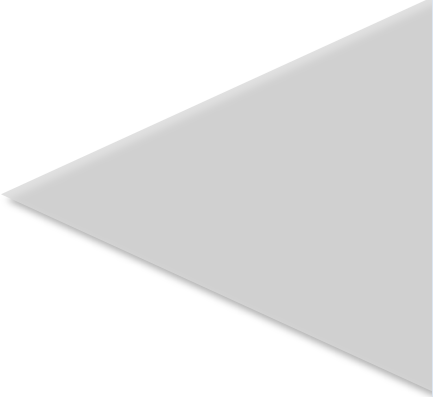
- Linear algebra

- Adaptive filters

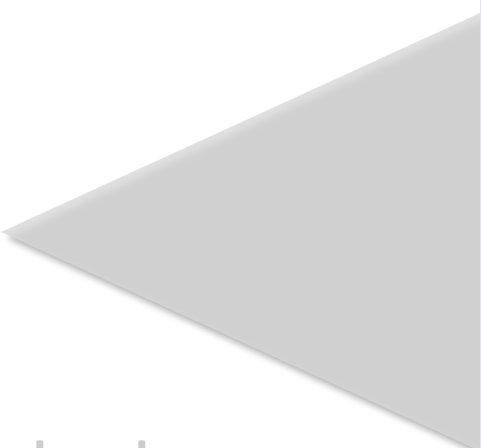
- Databases

- git

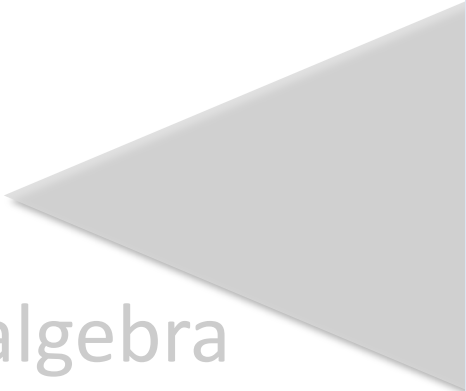
- Document

- 
- Install virtual box
 - Install linux Mint
 - Popular linux commands:
 - cd, ls, ps, mv, cp, rm, grep, find, |, less, regex
 - Install pycharm
 - Install python libraries (anaconda)

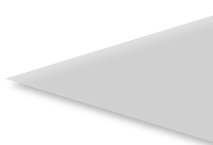
- linux
- **Java**
- Python
- Linear algebra
- Adaptive filters
- Databases
- git
- Document

- 
- Install Eclipse
 - Install mysql for windows
 - Write a csv parser
 - Junit tests for parser
 - Write class to connect to db
 - Batch load csv to db
 - Stream csv lines to db

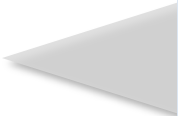
- linux
- Java
- **Python**
- Linear algebra
- Adaptive filters
- Databases
- git
- Document

- 
- Basics of python
 - Write txt, csv parser
 - Write json AIS class
 - Plot the json
 - Numpy, random numbers, matrices


- linux
- Java
- Python
- **Linear algebra**
- Adaptive filters
- Databases
- git
- Document

- 
- Basics matrix algebra
 - Derivatives of matrices
 - Ordinary least squares
 - (code OLS in python)


- linux
- Java
- Python
- Linear algebra
- **Adaptive filters**
- Databases
- git
- Document


- 
- Basic adaptive filter
 - Square root algorithm (python)
 - Moving average filter (python)
 - Maybe Kalman filter (python)

- linux
- Java
- Python
- Linear algebra
- Adaptive filters
- **Databases**
- git
- Document

- 
- Jdbc connection
 - Basic sql
 - Create tables
 - Update, delete, query

- linux
- Java
- Python
- Linear algebra
- Adaptive filters
- Databases
- **git**
- Document

- 
- Create public github profile
 - Make .md file to document daily activities
 - Push all code to project

- linux
 - Java
 - Python
 - Linear algebra
 - Adaptive filters
 - Databases
 - git
 - **Document**
- 

- .md file of daily / weekly activities
- Powerpoint brief
- Basic latex equations for math learned