Effective Note-taking

* Bullet journaling
* Sketchnotes: draw in your notes
* Leave a page for index
* Make connections in your mind
* Stop highlighting or underlining the notes, it erases the context of points and makes difficult to form connections
* Re-read your notes to refresh your memory
* Avoid too many notebooks

File management

* Proper named and numbered folders
* Back up your data regularly
* Stop redundancy
* Find efficient data storage places such as server, cloud, drive etc.

Productivity

* Stop Multi-tasking
* Sprints of focused work-20 mins rule
* Accumulate small tasks (less creative) and do them all at one go, eg, checking emails etc
* Connect the things you study, find a relationship
* Don’t let others destroy your focus
* First plan, and then do that work with focus. Focus is the most important skill
* Prioritize your work: Don’t take new problems until previous ones are solved, first things first

Research Skills

* Understand the problem statement very well
* Select the right papers: based on credibility and relevance
* Summarize the papers in excel file(very important, else you will forget later). Use a research template
* Read all technical terms , jargons related to your field through abstracts and websites and create a dictionary in your mind(no need to know everything in detail)
* Divide the research in two parts: 1) Paper reading 2) General information online
* Set deadlines
* Read right papers: Journal, publication date, relevance , author affliation
* Read breadth first: broad idea by skimming through headlines, abstract introduction, can I apply this
* Read Depth second: Understand the method, assumptions, errors statistics, conclusions
* Understand the basic experimental set up of the problem
* Questions to ask while reading the paper:
  + What the main idea?
  + What are the assumptions?
  + Are the assumptions reasonable?
  + Does your problem follows the same assumption?
  + What are statistical test and error stats used to examine the method?
  + Does this follow the general experimental set up?
  + Is the method reducing the error significantly compared to other conventional methods?
  + Do the conclusions logically follow the observations?
  + What can be other explanations of the observations?
  + Is there any interesting observation left out by the author?
* Questions to ask after reading the paper:
  + Whats the new idea?: extract the innovation
  + What are the major points ? and summarize them
  + Can I use this method or any part of this method?
* Use other resouces (other than research papers): Abstracts, ppts, video, demo, code, pre-prints, blogs

Good programming practices:

1. Proper formatting
2. Uniform naming convention
3. Modular programming
4. Proper commenting
5. Portability: Not hard-coded
6. Proper arrangement of working folders and data

Image Processing and CV

1. Scikit-image tutorial
2. Python crash course
3. Revise image processing(from BKM and Gonzalez book) and select algorithms to code
4. Learn Computer vision (from video tuts and book) and select algorithms to code

Platform to use: Python, openCV, scikit-image, scikit-learn

Some ways to push your boundaries are:

* Try working with a larger dataset than you’re comfortable with
* Start a project that requires knowledge you don’t have
* Try making your project run faster
* See if you can teach what you did in a project to someone else

**Types of projects**

DATA CLEANING

Dta story telling

End to end

Explanatory post

* Ability to communicate
* Ability to collaborate with others
* Technical competence
* Ability to reason about data
* Motivation and ability to take initiative

Email management

* + Set up 3 email accounts: work, personal, bulk
  + Schedule a time for email check and keep your inbox zero
  + Do not check emails while on the go in lift, or line: reduces your ‘be in the moment’ activity, let yourself daydream
  + Keep work email only in the office and not in personal devices, else you are kept occupied in the office work
  + Reduce your time of email reading and responding

Productive breaks

* + Take a five minute to 10 minute break after doing 40 mins focused work
  + Things to do in a break:
    - Prepare snack
    - Give head/neck massage
    - Read an interesting article
    - Watch ted talk
    - Make coffee
    - Clean space around
    - Play mobile games like lumosity
    - Go out for a walk
    - Call a family member
    - Listen to a podcast
    - Hangout with a friend
    - go out for lunch
    - book a massage
    - play a sport with friend
    - sit in a café and watch people