First Years
What to? And what not to?

By Kushashwa Ravi Shrimali

A compilation of all important resources

What do people mean by ‘explore’ CS things in first undergraduate year? Quantify.

This is exactly what I would recommend undergrads in freshman year.

Here is a typical concrete quantification depending on your area of interest:

- Read a research paper every day
- Solve 4-5 non-trivial algorithmic problem every day
- Write at-least 100-150 lines of code every day. The more the better. Code for 2 hrs apart from your academics every day
- Resolve a simple issue (easy pick) on open-source repositories every 2-3 days
- Read 2-3 blog posts about latest state of the art technologies every day
- Dedicate 6-7 hrs (or upto 10 hrs if you aren't doing anything else) for online courses and video lectures

Answer by Ashish Kedia: https://www.quora.com/What-do-people-mean-by-explore-CS-things-in-first-undergraduate-year-Quantify/answer/Ashish-Kedia

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Some other tips while exploring technologies :

- Do not trust your friends when they say that certain area is boring. Explore it before making conclusions.
- Always ask advice / guidance to a more experienced senior. Senior (Final) year students are best.
- Do not try to do a cost-benefit analysis of the technology you're exploring. Everything is equally useful at the end of the day. Focus on learning and not on the end result.
- Be open towards learning new technologies. Many students make certain technologies and languages as their favourite. They suffer from a technological inertia in a sense that they cannot adapt to the needs of modern world.
- Spend a lot of time in optimising your productivity. Squeeze out the last remaining seconds from your schedule. Spend time in personalising your development environment and setting up your favourite text editors.

Answer by Ashish Kedia (Source: Quora)

“What’s the difference between a champion and someone who’s forgotten? A champion shows up!”

–Greg Pitt

Should 1st year computer science undergraduates sign up on GitHub?

Should 1st year computer science undergraduates sign up on github?

Ashish Kedia, Computer Science Undergrad, India

Updated Mar 22, 2017 · Upvoted by Sumit Kumar, Pursuing Masters in Computer Science and Suriya Narayanan, M.Tech Computer Science & Mathematics, Sri Sathya Sai Institute of Higher Learning (2017)

Originally Answered: Should 1st year computer science undergraduates sign up on github ?

Signing up for Github is probably the first thing you should do after reading this answer if you haven't signed up already. As a first year you will have a lot of free time and learning such tools now will only help you in future.

Note that signing up for github alone won't make much difference. You should start learning git especially the command line tool. Make a sample repo and clone it. Make changes to local repo and then push it.

Answer by Ashish Kedia (Source: Quora)

As a first year undergrad, apart from basic coding what else should one know before starting with the core studies in the second year?

Ashish Kedia, studied at National Institute of Technology Karnataka, Surathkal

Updated Sep 6, 2016

I will tell you my story!
I was good at coding since 9th Standard (we learnt programming as part of our school's curriculum. It was just GWBasic, Logo and dos commands)

In plus two, I learned OOP Concepts! We used to practice using C++. It had pretty decent command over C++. (But not STL). I learned Linked List, Stack, Queues all in 12th standard itself.

Then came NITK. First Year, Physics cycle. Again those basic stuff, printf, scanf, else if, switch, and other things. I used to wake up only when the lecturer caught me. After that I used to blabber some random stuff, confuse him and again go back to sleep! Labs were too silly for me! Fibonacci, HCF, LCM, Floyd's triangle and all those rubbish stuff!

Fortunately, I knew about Coursera. I did the Stanford and Princeton Course on DSA. They gave me a good insight.But still I had no idea about the big world of Algorithms, Coding and a pool of languages available. It was when I came to my second year that I realised how important coding is!

Answer by Ashish Kedia, Source: Quora

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I was introduced to Competitive Coding! The "Efficiency" factor crawled in. I have been coding ever since. I regret the fact that in-spite of being good at coding I wasted a lot of time because I lacked awareness. I tried my best to cover up!

My advice to you: Do not look at your course structure or your peers! Go Ahead Explore the different areas! If you are a good coder, learn more. Learn better algorithms or try taking up a mini-project. Try to use coding to make your daily-life simpler. Try your hands on App Development or Machine Learning. Go through various papers. Take online Courses. Read relevant technical articles on websites like stackoverflow or geekforgeeks. Spend your time wisely.

Basically do anything you can! If required take help of your seniors! Make the best use of internet.

At some point of time you will have to discover your area of interest. Your passion. The sooner you do the better it will be.

Answer by Ashish Kedia, Source: Quora

“Being a good engineer is all about attitude”

- Jessica Su (Stanford CS, Ph.D.)

I am assuming that you're better than an average student. By the end of the freshman year, a CSE student should know the following things :

- A decent ability to program in at least one programming language. At least one project having > 1000 lines of code, in that language.
- Read at least a few research papers. Should know how to search for publications and understand them.
- Should have collaborated with someone else using version control tools like Git.
- Should have taken part in at least 1 hackathon.
- Should have read at least 2-3 books on programming languages.
- Should have completed at least 1 to 2 Online Courses along with programming assignments involved. It is okay if the course is non-technical.
- Should use Linux on a daily basis and not just for programming. This is not very necessary, but it is something that I would highly recommend.
- Should know how to compile programs and execute binary using command line. Should be able to use IDEs too.

What are some of the things that a CSE undergrad should know after completing his 1st Year?

For > average students