digit FastTrack

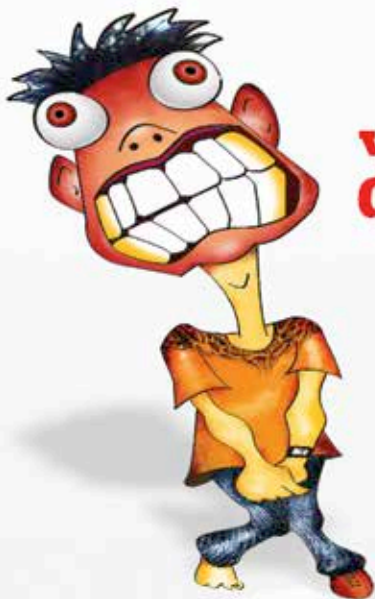*YOUR HANDY GUIDE TO EVERYDAY TECHNOLOGY*

to LEARN ANYTHING

- Don't wait. Educate.
- How to start your learning journey
- MOOCs revisited
- Are they worth it?
- What should you learn

- Learn according to timeframe
- There is no one formula for all
- Find a group to ease things
- Walkthrough - Learn coding and carpentry
- Getting hired!

FAST
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to

LEARN
ANYTHING

CHAPTERS

LEARN ANYTHING
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server

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Introduction

A lbert Einstein once famously said, "Education is what remains after one has forgotten what one has learned in school." This for many of us at Digit is a very important lesson in itself. In the team we have engineers interested in genetics, business grads who spend every spare minute reading up on technology, and journalism majors who routinely tinker with electronics. Study, learning, education – they're all interrelated – not absolutes confined to strict silos. In India what we learn is tied in very rigidly to the field of study we chose. If you are an electronics engineer it's highly unlikely you'll get to take a course on music theory as an elective and *gasp* even earn credits for it!

This is why after having done an FT to e-Learning a while ago we were keen on following up with something that goes beyond just sources of information or a courses-based top-down flow of information. This FT tries to go a step further and endeavours to show you first hand ***what*** to learn and more importantly ***how*** learn.

Your journey starts by identifying what you are most suited to learn, that is, finding out where your aptitude lies. We wouldn't want to judge a fish by its ability to climb a tree now would we? Once we've identified this important aspect, we get on to conventional methods that you can use to start your learning journey.

After a bit of research into the various theories of learning and human behaviour, we found that often people are often constrained by the amount of time they can devote to learning a new skill or topic. For this precise reason we have a chapter devoted to learning based on time frame. You have 10 minutes? Perfect, learn how to become a Google guru . You have a lazy weekend? We got you covered - that's how much time you need learn CPR. A month? Maybe you can tackle the basics of a new language. We'll show you how.

Next, we have a bit of motivation planned for you. It's said that learning becomes easier and more fun if you're part of a group of like-minded learners. Our chapter on finding and creating groups will add the much needed "social" angle to your learning journey.

To wrap up the FT we have four special skills that we do a detailed deep dive into. The methodology we've applied to learning how to code or carpentry can be applied to learning anything. However, these two skills have been highlighted in the hopes of forming a template.

Last but not the least we'll put all your newly acquired knowledge and skills to the test and help you actually get paid for it! What more could you want? So get going, *noli cedere cognoscere*.

(That's latin for never stop learning!)

DON'T WAIT. EDUCATE.

Life is a learning experience. So learn, learn, learn!

I t's a good time to be a student. With the internet being the massive giant of information that it is today, and the growing appeal of distance learning, the options are nearly infinite. If you're a 90s kid, you would have seen the horizon of education expanding in front of your eyes. If you're a 90s parent, you would have to stop and take a step back to realise the fundamental career and lifestyle options that you had back in your day were no longer the limitations that your child was held to. There's so much more out there to do. A big adjustment for both parent and child, to be honest.

But here we are, in the mid-decade of the 2010s, and the sky's the limit. So why wait to grab your own star?

What kind of skills do you need to develop?

There's no one answer to that question. You and you alone know what your strengths and weaknesses are. Play to your strengths, and aim at negating your weaknesses. Go with what interests you, inherently. Keep in mind that school is where you were brute-forced your basic education. Move beyond that and remember that life is a learning experience. The global scenario is ever changing and like the universe, ever expanding to cover new avenues of education. If at any age you think you're 'way past your prime', well, one is never too old to stop learning new things. It's always a good time to step back and look at the road not taken and consider taking it.

Step One: Look into thyself

The first step would be to take some time to think about what you like doing. The only task worth throwing your heart and soul into is the kind of job that owns your heart and soul. So figuring out what gets to you is the first step towards figuring out what you need to learn. This is a fundamental flaw of a society that takes away that willingness to learn new things. Well, the old argument of 'what's the point of learning something that won't be a part of your future or your career' has been nullified. Want to learn cooking? There's always scope to be a chef. Always enjoyed trying out new delicacies, or reading that new best-seller, or even watching that blockbuster that released last week? Well, critics are in no short supply, but with the hundreds of opinions out there, we're sure you can find your fan following somewhere. At the end of they day, if nothing else works, you can follow the startup culture. Start your own little project. Work for yourself, independent of any professional name, brand or firm. Be your own person.

Step Two: Aptitude

The second step would be trying to figure out what skills you have the aptitude for. There are several organisations, both online and offline that do aptitude tests and performance tests professionally. Approach them and think about what the professionals think you'd be good at. But remember: advice is good advice when taken in moderation. Don't ignore it completely, but don't wear it on your sleeve, either. Ultimately, learning anything new is about you, more than what other people think is good for you.

When looking for places to check your aptitude, try avoiding online tests and surveys. Most of these are scams, or unreliable, at best. There are several companies out there, however, who do a great job at assessing your inherent potential. They have a full-time in house team of professionals, including several psychiatrists to read into your test results and come up with valid projections about your potential skill set or aptitude towards a desired skill set.

Step Three: Research

Step number three comes into play when you're learning a new skill for a career path. This is when you put your years of training hounding Google to good use. Start researching and taking a good look at what kind of skills are needed for what kind of jobs. In this day and age, almost any kind of skill set is needed somewhere or the other. It is, however, important to hone said skills in a disciplined learning environment. Which is where the personal research comes in. Look around for sources to expand your skills and dust the cobwebs off your inhibitions. Remember to cross-examine what you find with the results of your aptitude test, just to see what lies in front of you. If you're having a hard time figuring out where to start, read this Fast Track cover-to-cover for good starting pointers on where you should let your learning begin.

Dismiss nothing

A lot of skills are sometimes taken for granted. What people don't realize is that today multi-skilled personnel are in huge demand. No one wants to pay five employees when one can do all their jobs without breaking a sweat. Why hire a team of PR personnel when that one guy can handle all your clients seamlessly? Why hire a copy editor when your writers can proofread each other's work? Why do you need a Director and a Writer on a movie when the writer can handle the director's job too?

The current job profile being sought after in every field is the proverbial Jack of all trades. But even if you manage to perfect two or three good malleable roles at the workplace (without burning yourself out), you're that much closer to being inexpendable.

So even things like being good at yoga (yoga instructor) or gaming (game tester/designer/bug reporter) can lead to several career options in your near future. Don't dismiss any kind of skill you may have, however mundane or frivolous it may seem. The chances are - if you've got it, someone wants it. And the deeper your pocket of honed skills is, the more people need you.

If all else fails...

There's always that ever-looming Sword of Damocles that is the 'what if?'. What if this leads nowhere? What if I'm not as good as I think I am? What if uncle-aunty-mumma-papa and didi were just saying I'm awesome to keep my spirits high?

Well, what's life without a little risk?

Take a chance, and you may even surprise yourself. In the very least, at least you'll have some fun. When's the last time they taught you how to do that? 3rd grade?

And yet, in the face of reality, be smart enough to have some kind of fallback option. The safety net. That old MBA or Engineering degree. Or in the very least, a viable grasp of English so that Digit can hire you as a writer and make your ends meet. Never leave home without a fallback. But don't forget to never stop learning, either. Keep your heart, mind and soul at constant work. An idle mind is a motherboard ant-hill. Fried and useless. So turn the page and get started!

STEP INTO THE LIGHT

Take the first step towards learning anything new - go online!

The task of finding out where to learn your newly selected skills does, admittedly, look very daunting; But organize your thoughts and it'll be a lot clearer than it seems in the start. Take notes. Do your homework on what you need to do to hone your own personal skill set. Take some time off from the hustle and bustle of day-to-day activities and dig into the resources available to you. The three-step process previously mentioned in Chapter One is a good place to start. But here's a small guide to help push you to get you on the right track.

Aptitude tests

As mentioned earlier, before getting into the task of learning anything new, it's always wise to know if you have the knack for it, or the kind of effort it will take to develop any kind of skill. Here are a few sources for knowing your natural aptitude:

There are plenty of tests available online to get you started. And quite of lot of these services have the test results analysed by a team of their in-house examiners consisting of psychiatrists and career counsellors hailing from different walks of life. They sit down with you and discuss possible

career opportunities and the path you need to take to start off in that career. This is helpful in more ways than one. Firstly, the results of the aptitude test itself will tell you what kind of skills are more in the natural vicinity of your mind-set. This can tell you whether or not what you wish to learn will come naturally to you, making it a more confident decision to make.

Secondly, if your choice of learning has anything to do with future career prospects, the test results will tell you if it's a career you're more inherently inclined to.

Learning Online

There are several easily accessible (and mostly free) avenues for you to take when it comes to learning the skills you've selected for yourself. There are, of course, ways to find out about offline courses in universities, like IGNOU's unusual crea-

A simple aptitude test should clear a few doubts

tive courses. But if you feel like sitting at home and learning at your own pace, here are a few ideas for you:

iTunes University is an interesting place to rummage for interesting things to learn online. It has a vast collection of lectures and talks on subjects ranging from comic books to cooking and everything else under the sun. Sometimes, you end up finding things you would have never considered learning, but is interesting in itself. It's a great place to scroll through in case you want to learn something new, or pick up a hobby, but aren't sure what you want to tackle. iTunes U also has several channels dedicated to lectures and speeches during events at some of the biggest colleges in the world. A great way to listen to people at the peak of their fields talk about subjects pertaining to your interests.

Khan Academy has been picking up supporters from all across the nation, if not the globe. The online teaching website set up by Salman Khan (not the Bollywood actor) has risen since its inception back in 2006. It's primary method of teaching entails 'micro lectures' on YouTube explaining facets of any subject ranging from the civil sciences to basic mathematics.

It's a great resource for learning about academic subjects or improving your knowledge of a particular specialised segment of any subject. For example, if you're curious about expanding your knowledge about Indian Political History or the American Civil War, or even to get over your fear of Calculus, Khan Academy is a good place to start.

Coursera is an online e-learning website that has sources spanning Berkeley College of Music and USC to the Universities of Taiwan and Amsterdam. The websites hunts down reputed teachers across the globe for online courses on practically anything under the sun. If you want to learn how to be an independent musician, or simply want someone to teach you the basics of becoming a zoologist or a social scientist, Coursera would

With verifiable certificates, Coursera adds value to your resume.

probably have an international expert of some renown to take some time off and teach it to people on the website. Coursera follows up their courses with legitimate certificates of merit if the participants have done well in the course. Some of the courses are available for free, but to be honest, they're all just teasers. The really interesting courses are mostly paid courses, albeit fairly affordable if you're even a little serious about learning something new.

Gyaan Exchange is an organisation that deals with putting together courses for specialised training or learning. Gyaan Exchange hosts courses across the country and are very approachable if you're looking for learning anything. Their philosophy revolves around 'teaching each other'. Gyaan Exchange is approached by several specialists in their field who are interested in holding courses for a limited body of students to teach a specific aspect of their knowledge. For example, a chef teaching Euro-Mexican fusion cuisine, or a Stockbroker giving a lecture on the history of the Indian Stock Market. These specialists are filtered by Gyaan Exchange and they act as the mediators between the potential teachers and the potential students. The course with the proposed curriculum and duration is uploaded on their website and interested people enrol for classes. There are both free and paid classes available, depending on the course. Most of their courses are in the form of video classes online, but there are several classes hosted by them in several venues, across the country, including the major metropolitan cities.

Caution!

The internet may be brilliant and full of opportunities, but only the naive walk in with their eyes closed. Legit online aptitude tests and educational/e-learning websites do exist, but there's scope for scams and spoofs, especially since money is involved. Keep your wits about you when scanning any of these websites. If possible, double check them with websites like WooRank that list out unreliable and phishing websites. Keep to the well-known sites and you'll be fine. Or at least less likely to be scammed or cheated in any way. Do some research on Google and Quora for popular opinions regarding your personal goals as well.

Web hazards aside, you'd be surprised how many people out there are great teachers eager to impart their knowledge to anyone interested. From public forums like YouTube and Vimeo to blogs and personal websites on the backend of the internet, there are sources all over. Give it a shot.

MOOC

If you're going to turn towards the Internet to start your learning journey then MOOCs are something you'll be interested in

What is a MOOC?

An MOOC is a Massive Open Online Course. It is a course aimed at open access via the Web, leading to unlimited participation. Basically it is a course that can be taken anywhere and by anybody. The prerequisites remain limited to subject knowledge rather than entrance tests or scores. Built on the foundation of existing online courses, it is an entirely different take on distance learning. Students and professionals can affordably learn new skills and earn degrees adding significant weight to their portfolios. MOOCs are the start of the most revolutionary phase of higher education.

The Rise of MOOCs

MOOCs came into being when Stanford's Computer Science professor Sebastian Thrun made his artificial intelligence course freely available to all online. About 150,000 people signed up for it. Since then, with the

participation of many universities, the online started replacing the offline. Even students already enrolled in universities prefer to watch their lectures and submit their assignments online.

Initially, MOOCs were entirely focused on computer science and math classes since it was people with this background who were interested in getting their courses online and having access to similar courses. Now there are MOOCs on every topic from Chinese Architecture to Nutrition and Diet.

You have plenty of platforms to pick and choose from

Many elite universities like Princeton, Stanford and MIT are embracing MOOCs in a big way. These brands seem to cement the quality of learning associated with a MOOC. People are ensured of a rock solid curriculum and well explained lectures. They only need to put in the learning effort.

What does a MOOC consist of?

A MOOC typically consists of a series of video tutorials, lectures and work-shops. It has a start date and an end date but usually runs every month or so allowing you to space out courses. There are practice exercises, tests, and assignments. The course material is generally extensive and the lectures are always available to recap since they are in video format. There are also forums for students to connect with each other. These forums are highly engaging and go a long way in helping the course along.

How to choose the right MOOC for you?

There are a couple of factors to consider while choosing a MOOC.

1. Are you planning to transfer to a professional college in the future?

If this is the case then find out if the college you are opting for will offer credit for completion of such courses. Select a MOOC recommended and recognized by them so as to maximize the results from the effort you put in.

2. Time Availability

How many hours in a week are you willing to put into the course? Check out the course curriculum and suggested time investment before committing to a course.

3. How much money are you willing to spend?

Most courses are available for free. But if you have a very specific course in mind chances are that the university offering it may not put it up for free. The fees are nominal but again if you don't have the time to put into a course then spending even a couple of dollars on it is meaningless.

4. Which site offers the best course for the specialization you have in mind?

Research is key here. Read reviews from students who have already taken the course, go through the curriculum, and check the kind of assignments and tests the course entails. One option is to enroll for two courses simultaneously and continue with the one you feel more comfortable with.

MOOC Programmes out there

Coursera

Cousera was created by two Stanford professors, Andrew Ng and Daphne Koller. They firmly believe in the principle that education should be a right, not a privilege. This is why they offer their courses in many languages giving them mass appeal.

EdX

EdX is a completely not for profit open source learning platform launched by the Massachusetts Institute of Technology and Harvard University.

Udemy

Udemy has over 4,000 courses which you can register for by paying a nominal fee of $19.99 (Rs. 1,230 approx.) per course. The instructors receive a cut of the fee. Courses range from yoga to photography.

Udacity

Udacity's learning concept is slightly different from the other MOOCs. They promote intellectual engagement and problem solving through their programmes. Their focus is on math, science, technology and engineering subjects. The programmes are divided into beginning, intermediate and expert levels. On completing these you get a certificate which you can upload to show off your new skills.

Videos are a great teaching aid and most MOOC courses have plenty of them

Issues and Concerns with MOOCs

As with all new things MOOCs have a couple of issues which should be discussed.

The level of engagement with a MOOC as compared to a traditional classroom setting is almost nonexistent. With a MOOC there is no face time with the professors. Sometimes a little guidance from a professor goes a long way and the lack of it is probably one of the biggest issues students face in these courses.

For students who are ready and willing to dive into learning and exploring new subjects this is not a concern. They can make use of the forums on the site or look on the Web to get doubts cleared.

Most students take these courses out of curiosity. Since the course is free, what's the harm in enrolling, right? This, of course, is not enough to carry you through the entire five to six weeks of classes.

With MOOCs the attrition rate is exceptionally high. The average student loses interest by about the second week of the course. These courses have a scary attrition rate of about 7%. However, since thousands of people actually enroll for these courses, the total number that completes them is substantial.

Grading is an issue with such a large number of students. While teaching assistants pitch in, these courses mostly rely on MCQ tests and peer assessments to grade students. This leads to an issue of properly gauging a MOOC student's in depth knowledge of a subject.

Value of a MOOC Certificate vs. Traditional Degree Certificates

MOOCs can be mentioned in your resume. They will be considered as an additional factor but not necessarily a qualifying one. However, it is very likely that a recruiter will look at you as a self starter and motivated candidate if you have a few of these on your resume. It will show that you are interested in mastering certain skills even if you have to go the extra mile to achieve it.

Statement of Accomplishment vs. Verified Certificate

A Statement of Accomplishment simply states that you have completed the course with a certain end score. All you have to do to get it is complete the course and sign an Honor Code which states that you will not cheat while attempting the course. The Statement of Accomplishment has the stamp of the site from which you have obtained the MOOC, for example Coursera.

A Verified Certificate is typically one that you get when you pay for the course. It has the emblem of the University that offered the course as well. When you pay for the course the University uses methods like tracing your typing pattern and photographs to identify you. This basically is an added measure to ensure that the student does not cheat thus making the certificate a little more valid.

Despite a lot of criticism, many people rely on MOOCs. If you're not after certificates but rather interested in growing your knowledge on a subject,

Benefits	Factors	Issues
Most MOOCs are free, unless a form of accreditation is involved, and open to anyone who is interested.		MOOC providers can currently offer courses for free, but not indefinitely.
Learning occurs in an informal manner at the participant's own pace.		Students aren't able to engage in real-world socializing or experiences.
All that's required is a computer and an Internet connection.	STRUCTURE	Technical difficulties with a participant's computer or Internet connection can impede learning.
Participants do not need to be enrolled in the MOOC's host institution, which may have a costly tuition.		Students may be used to or prefer the structure a traditional college course offers.
Work can be shared, viewed and critiqued by all participants.		Academic dishonesty may become an issue due to lack of supervision.
Outstanding professors and industry leaders can reach more students all over the world.	EXPERIENCE	Students need to become responsible for their own learning.

The world of MOOCs summed up in one simple image

these courses offer phenomenal help. After all, quality surpasses quantity with most these days.

IS IT WORTH IT?

Are MOOCs really worth the time and money that you invest in them? Read more to find out

Why are Verified Certificates of Accomplishment important?

For a substantial fee starting from $50 (₹3,000 approx.) sites like Coursera and edX offer Verified Certificates. These essentially are a way to prove that the person registered for the course is indeed the person taking the course. They do this by taking a typing sample and asking you to submit a photo of yourself.

Verified Certificates provide some level of traceability. For hiring managers and HR personnel this is important to get you in the door at certain companies.

Since MOOCs have a notoriously high attrition rate, verified certificates show that the candidate has some level of tenacity and accountability.

Verified Certificates, in a way, compel the student to complete the course since he or she has paid money for it. When the course is free, students tend to take it for granted and either drop out or procrastinate by convincing themselves that they will take it later when they have the time.

Verified SOA

Verified Certificates give students a feeling of accomplishment and can be added to LinkedIn or other job portal sites
.

Hiring statistics for MOOC certified personnel

More and more companies are now seeing the worth of MOOCs. The reason they are becoming receptive of MOOCs are factors like student debt, cost of higher education and whether higher education as it stands actually prepares a student adequately for the work force.

Some companies like Aquent are even creating their own programs to train employees. They created an HTML5 MOOC and more than 10,000 people registered for it. Out of those 10,000 only 367 took the final exam and 200 were recruited by Aquent.

Another company that started building MOOCs and selling them is TrainSignal. Their employees used it to get familiar with technical subjects with which they did not have much hands-on experience.

Udacity has a career placement program that is slowly gaining momentum. They place students as software engineers, web developers, data scientists and instructors. They place students at a plethora of companies ranging from Fortune 500 companies to startups like Spotify and Square.

Microsoft Research India has initiated a pilot project with Visvesvaraya Technological University (VTU) for a MOOC-ish experiment. They are offering free online certification for Algorithms, Design and Analysis for engineering students in a setting that combines the classroom and the online. It is a semester long program and the top ten students get a chance to intern with Microsoft Research.

MOOCs have been proven to give quality education in terms of curriculum and content. They are comparable even with degree courses.

College Transfer Credits

In high school, there are Advanced Placement (A.P.) courses that offer college level placement and course credit. These help you get a head start on college while saving on college tuition. For those who are not in high school and still want to avail these credits, MOOCs provide a convenient solution.

In 2012, Colorado State University started offering full transfer credit for students who have completed the free introduction to the computer sciences course offered by Udacity. This was the first time a college in the United States started offering credit for a course on Udacity although several universities in Austria and Germany already did.

The American Council on Education's College Credit (ACE CREDIT) has evaluated and recommended college credit for many courses on Coursera and Udacity. Students who successfully complete these courses can request a transcript with credit recommendations from the ACE which they can then present to the college of their choice for prerequisite or undergraduate credit consideration.

In 2013, a company called Academic Partnerships started an initiative called MOOC2Degree. It enables students to earn credit for a MOOC and then apply it to a degree at one of their partner institutions. One of its institutions is the Arlington College of Nursing, University of Texas.

Open Education Alliance

Across the industry, a bunch of employers and educators have come together to form the Open Education Alliance to provide certain services to students. These services are in the form of courses or 'Nanodegrees' on the latest technology trends and relevant higher education courses. They aim to bridge the gap between the skills desired in the industry today and what is being taught in traditional universities. Sebastian Thrun, the founder

of Udacity, said that the Open Education Alliance aims to put the industry first so that you can learn the skills necessary.

While the skill set of employees today changes continuously, the institutes that provide higher education do not. This reduces employability of students who have just entered an already fiercely competitive job market.

Nanodegree

A Nanodegree is an online certification which you can earn in about 6 - 12 months. Each degree costs about $200 (₹12,000 approx.) a month. It teaches you skills that will qualify you for entry level positions in many software companies. What separates nanodegrees from other MOOCs is that there is some level of interaction beyond the recorded videos and forums. They set up office hours where students can call in and ask questions.

Another advantage of the Open Education Alliance is that some companies like AT&T contribute to development by offering scholarships and internships to students.

Some of the contributors to the Open Education Alliance are Google, AT&T, Autodesk, Nvidia, Cloudera and Khan Academy.

Google has recently started giving less importance to college degrees in its hiring process. If a candidate has completed an OEA, Google hiring managers are more likely to consider that candidate than someone who just has a fancy college degree.

Sebastian Thrun – founder of Udacity and OEA

Digital Internships for MOOC Students

Coursolve is a website that connects prospective students from all over the world through digital internships. These digital internships are short online work based learning projects. Coursolve helps early and mid level employees put their education to test and sharpen their skills. They can work on projects with real organizations, enhance their skills and build relationships with companies and mentors. Learners receive badges and letters of recommendation from companies and this helps considerably in building their CVs.

Small business owners can post internships on Coursolve to get in touch with talented young professionals and even hone their own management skills.
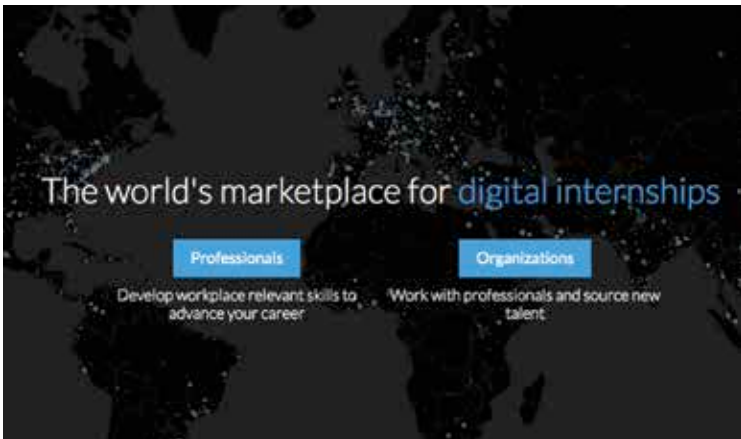
Coursolve

How to present MOOCs in a Resume

Overall, whether you are keen on learning new skills or enhancing the ones you have, MOOCs are the way to go. Once you've decided to pursue this way of learning and have your certificates in hand, it is important to know how to present it to a prospective employer. While the job scene is slowly changing by way of determining good candidates, some companies are still unaware of the worth of these courses. You have to know how to prove the legitimacy of these studies. Here are a few tips:

1. Do courses that are rigorous and tough but at the same time related to one another. Just one course will not perfect a skill. Build on the

Massive .... **A lot of students.** These online classes are typically not capped—some have over 100,000 enrolled.

Open .... **Taking the classes are free.** However, if you want a certification of completion, some programs require fees.

Online .... **No attendance necessary—it's all online.** It's a combination of streaming video, forums and written and interactive online material.

Courses .... **MOOCs emphasize key features of a class** such as engagement with the material, ideation and networking with other students.

MOOCs

fact that you have done several courses and gained real expertise in the subject.

2. List all your courses first under an 'Education' or 'Skills' skills section to pique the interest of employers.

3. Rather than listing the courses, explain how they are related to each other. Tell a story with your course path. It helps bring clarity to resume screeners as well as makes for an interesting read.

4. Augment your course-work with practical experience. Volunteer, intern or even apply your skills at your current workplace and explain how they have helped you advance. After all, practical knowledge beats all theoretical knowledge when it comes to a job.

5. Showcase your work on a website or online profile. Make your portfolio visible either through a website or, for coding skills, a repository like Github. ◼

STREAMLINE YOUR SKILLS

Here are a few suggestions based on your primary stream of education

Almost any skill you would like to learn now has a companion website or App, as we will discuss further in this issue. However, considering the cutthroat competition that we are a part of, learning new skills usually come in handy when they bring in a means to an income. Taking that into consideration, some skills can be divided into the three main streams of education that exist in India - the Arts, the Pure Sciences and Commerce. Just to give you an idea of what kind of skills one can develop professionally and how they come in handy in said professions, here is a small list of things you may consider learning in any of those three streams:

Arts

Depending on whether you decide to specialize in fine arts, performing arts or liberal arts, the skills you need to pick up would vary in form and aspect. However, here are some skills that will help you professionally regardless of the specialization.

Learn how to use Excel

This may seem funny at first, but very few people realize how hopeless they are at using an excel sheet. Sure, they may be able to put in numbers in one cell and letters in the other, but the only time this software is used to its maximum potential is when the user knows how to create his own formulae and tabulate data to use Excel the way it's meant to be used instead of an easy way to print tables. There are high-flying professionals out there in every field - media, event management, brand managers, producers, agents - who know what a f/1.4 10-20mm EF-mount lens is, but can't tell a =SUM function apart from a =TEXT function. Knowing Excel can make the difference between acing a job interview and failing miserably.

Media editing

Knowing how to fiddle with Audio and Video equipment is always a plus point in Arts-related careers. Artists need to be photographed, singers need to be heard, writers need to be read. Since the advent of the digital era, it's always handy to know your way around audio and video editing software. It's fun, and a definite plus point from the point of view of employers. There are a few software out there used by the industry as a whole.

Although most editors prefer the Adobe Creative Suite (though the Apple fanboys swear by Final Cut Pro), Avid *(https://www.avid.com/US/)* is the industry standard for

Avid is widely used in the movie industry

video editing. On the audio side, Nuendo *(http://dgit.in/ftcrtnnd)* is also a favourite. Easy to use, with great tools, it's extensively used for good digital multitrack performance on radio shows.

When it comes to image editing, Adobe takes the cake with its Photoshop *(http://dgit.in/ftcrtps)* software, which rarely needs introduction.

To get a preliminary grasp at the basics for any of these software (or the several dozens of other software), YouTube has several tutorials to keep you busy. The channel PhotoVideoEditing *(http://dgit.in/ftcrtpve)* is a good place to start. As for the software themselves, most of them are quite pricey especially if you want to use them to their full potential. There are

open source alternatives which are quite feature rich as well. GIMP, for example, is a decent image editing software.

Practice creative thinking

Since the majority of any future in an Arts-based career depends on your creativity, it may be time to start honing that imagination you have. Start doing exercises in creative writing or thinking. Start making an effort to genuinely think out of the box. Let your imagination run wild and do cartwheels around your head to free your thinking. There are many accepted techniques to free your thinking available online. It's true that several people say 'you're born with it', but tests show that even monkeys can be taught to think outside the box. And if you're reading this, we're sure you're smarter than your itchy cousin.

Several methods of freeing your mind also have a lot to do with spirituality. So maybe you could get two birds with one stone. Achieve inner peace and be creative at the same time. Just to be clear: spirituality has nothing to do with belief in God.

Brush up your organisational skills

Organisation inadvertently plays an important role in life. Even more so when you're the creative head of a company or the head of a theatre troupe. Some people are lucky enough to be naturally good at organising their work as well as their life. Most people don't have that luxury.

Maybe some day when you become big and successful enough, you will be able to afford a personal assistant who does all your organisation for you. But until then, those schedules aren't going to fill themselves, and you aren't going to organize your life by thinking 'I have a great memory, I'm going to keep everything in there'. Get a grip on reality and

Asana is an easy to learn service that helps you organise

make a solid effort in figuring out how to bring some order to the chaos that is your workload-heavy routine. An organised professional is a centered professional and a centered professional is always seen in a more appreciable light. Furthermore, one could make a successful job profile by having great organisational skills. Event management and video production requires people who are responsible and have a knack of keeping things in check.

Sciences

When it comes to science in recent times, the word is almost synonymous with technology. With the advances in practical biocircuitry and quantum theory in the past century, all three of the pure sciences seem to be looking towards tech being the crux of the future. In the up and coming digital future, there are several skills that can come in handy in not only careers, but even day-to-day life.

Coding

Ever seen the Matrix? Well, everyone in that world can see objects while looking at a screen full of random zeroes and ones flickering down a screen. Doesn't that make you feel out of place?

Maybe you don't need to memorize Binary, but learning the basics of coding may make it easier for you to understand your computer beyond 'turning it off and on again' and 'enter CD to play GTA V'. You may even end up getting so involved that you write the program that brings Skynet down on our heads. Either way, it's a great skill to have. The basics are easy to find online, albeit difficult to master. But then again, no skill worth having was easy to obtain. Be it Python, HTML or plain and simple Java, it takes a lot of work and a lot more patience.

If you want to start from scratch and make it fun, take a look at Code Combat *(http://dgit.in/ftscccom)* an online coding-based role-playing game.

Know your way around computer hardware

If you've been reading the magazine for a while, you would have got this part down, for sure. So go ahead and skip this one.

In the electronic age, the man who holds the circuitry is king. It's not easy to understand in depth unless you've got a background in electronics, but the basics are easy to grasp. There are hundreds of DIY websites out there explaining the various components of computers and how they affect its performance in their own way. Of course, it would be to your advantage to be able to practice on some real hardware. It would also be nice to keep company with a tech head who has the patience to take all your questions, no matter how dumb they may be. A Mr Miyagi to your Kreese.

Or you need to dig through the DVD this month and go through our Digital archive.

Dabble in some theoretical science

Quantum Theory, Fringe Robotics, Temporal Physics - all well-founded and

accepted branches of science. Some of them may openly toe the line between science and fiction. And yet the fiction of today is the science of tomorrow. No one expects you to be the genius who figures out how to make a functional robot to house a living human brain, make the first bioelectrical processor or crack the teleportation code. There's a good chance that immortality, biological technology and thought-speed travel may be out of your league.

And yet that's no reason to avoid taking a good look at the theoretical sciences. Knowledge of the theorised future is the key to lead the civilisa-

Theoretical physics might be a tall order here, but why not?

tion into the fantastic hereafter that consists of faster-than-light travel or technology that pushes mankind to its hypothetical limit. And besides - it's interesting! If you can't understand the math, look for sources that dumb it down for you and take it from there, one step at a time. There is more to life and science than is dreamt of in your philosophy, and it's good to accept that. On a professional level, it's good to know about what people are postulating out there. Just access to that kind of knowledge could be what differentiates you from all the other people out there. Make it so!

Commerce

Commerce has been accepted, across the board, as the most boring stream of studies. That is, unless you've got the mind for business and find terms like 'economic depression' exciting. Commerce geeks stand apart in a crowd, discussing the rise and fall of the stock market and the state of MNCs in the financial world today. Well, if you're one of these, or want to be, there are several skills that you can hone to make your way up the food chain.

Data Mining

Numbers and figures form the basis of commerce. Online analytical processing (or OLAP) were used to keep tabs on an entity or a company and to predict the path they may take in the near future. This can be done using easily available data. OLAP tools can be used by people to analyse multi-dimensional data interactively from multiple perspectives. Assuming you ask the right questions.

The next level of OLAP is the process of Data Mining. The beauty of this method is that you can get the same level of information without having to directly ask specific questions. Data mining serves two primary roles with respect to information: The predictive role and the preemptive role.

The predictive role uses your own hidden knowledge and cross examines them with probabilities and the likelihood of future trends. The preemptive

Data mining helps make sense of patterns from large data sets

role is when data miners use knowledge that you should probably have to do the same.

In short: Data mining does the hard work for you and figures out what questions to ask your OLAP tools for a more accurately useful answer.

It's an interesting skill and very hard to master. If you like a challenge, the rigours of data mining is completely up your alley.

Practice manoeuvring your way in the Stock Market

Having a good idea of the stock market is pretty critical to someone dabbling in the commerce stream. That's serious stuff. Not to mention addictive,

with some extreme cases that seem to emulate like gold fever and gambling withdrawals. It isn't a cake walk, especially if you don't know when to stop.

There are, however, several ways to skin a cat.

Ever since the rise in popularity of online trading, the fluctuations in the stock market have increased incredibly. Buying and selling stocks can be done in a matter of minutes, if not seconds. A good way to get a hang of the system is the CNBC hosted website called 'Money Control' *(http://dgit.in/monconvse)* which uses live data to create a stock market simulator for beginners. Basically, it's a lossless way of trying your hand at the stock market. Being a simulator, you invest imaginary money in very real companies and the simulator (over time) will tell you which of the investments were wise ones and which ones you lost money in.

The Bharat Stock Exchange website tried something similar as well, in the form of a game *(http://dgit.in/bsesmcb).*

These are just two of the Stock Market simulators out there. So if you think you're not sure you have what it takes to be a big shot businessman, try your hand at the simulator before you decide to take a crack at the real thing.

A grasp of business related software

It's safe to say that any kind of professional job you would be working in would have computers involved. And where there's computers involved,

Learn trading stock in a simulator before dabbling with the real thing

there will always be the software that has been designed specifically to make your job easier. When it comes to the commercial sector and business-related work, it's no different. Software used in business can scale from the basic to the uber-complex algorithm based near-AI software. But they more or less work within the vicinity of the following tasks:

Resource Management - to keep all your assets (and liabilities) in line. Document management - to maintain a clean and well-recorded history of the company's goings-on.

Procurement Automatisation - there are several business software that help to automate an organisation's purchases. The lesser the higher-ups have to worry about, the better.

Predictions - using data mining techniques to analyse the patterns in huge data sets pertaining to the repercussions of the company's progress so far to project the future of the company and the decisions that must be made to avoid problem areas in the company.

Enterprise application software - specific upgrades to commercially available software modified to suit the needs of a business-level organisation. Like website control, customer relationship management, employee scheduling software and lots more. EASes form the backbone of a modern corporation.

To help with these tasks, and then some, get a grasp over software like Basecamp *(https://basecamp.com/),* ClearTax *(http://dgit.in/ftbusiclrtx),* inDinero (*http://dgit.in/ftbusiidn),* Catch The Best *(http://dgit.in/ftbusictb)* and High Rise (*http://dgit.in/ftbusibr).*

Basecamp is a project management software that keeps teams updated with the progress of a project.

Cleartax is the digital chartered accounting software that keeps your taxes recorded and updates you on taxes owed. Based on your taxation, it also offers a premium version that suggests ways to minimise tax deduction by getting their own CAs to advise you on the same.

inDinero downloads financial information of your company and gives you a real-time business dashboard so that you can keep an eye on the financial status of your company - a convenient software for anyone in an organisation.

Catch the Best is a handy little software that is a great virtual aid for any company's Human resource department. It provides easy organization of all incoming job applications in the company, including any kind of data related to said applicants, like resumes, office-applicant communication history and more. Thus, helping streamline the hiring process within the company.

Highrise is similar to Catch the Best, except that it's meant for keeping an organised tab on a company/individual's client base.

Bottomline: Stay sharp

The rules aren't set in stone. And with an ever-adapting, constantly changing environment like the one we live in, the rules are even more fluid than they used to be. Skills have to keep improving to keep up with the times. Society is making its way to a point when specialization in a field will focus down to the scale of extreme micromanagement, leading to people being trained to be perfect in the smallest of tasks. Meanwhile, however, organisations are looking for people to be adept at everything within their field (and maybe even a few skilled at a few things without). Aim at keeping yourself up to date with the times, and being prepared for any kind of challenge life throws your way.

Interactive chapter

LEARN ACCORDING TO TIME FRAME

Now that you have decided that you want to go ahead and learn something new, let us see what you can do in the available time that you have...

Everyone is a little philosophical in life and therefore know the meaning of the statement 'the meaning of life is not in the goal but the journey'. So lets make the journey more interesting and learn as much as we can along the way whether it is becoming an excel guru, mastering cocktail mixing or learning how to jump from roof to roof if you are being chased by Agent Smith...

10 to 15 minutes

You will be amazed at the number of useful and fun skills that can be learned in 10-15 minutes. So when you have time to kill, try some of the following.

Become a Google guru

So till now all you have used Google is for its text search and that is your extent of knowledge about its capabilities. You will be surprised at what else can be done with Google: it offers a wedding planner, a timer, it can show your flight

Life becomes a lot easier once you know Google-fu!

schedule, see the 3D molecular structure of chemical compounds, see the list of books written by an author, get TV show schedule and reminders, do some math, plot graphs, solve geometry problems, search inside specific sites, tip calculator, and the list goes on.

Steganography, hide any file inside an image file

Now this can come in quite handy if you need to keep sensitive files on a pendrive or any other common storage because the advantage here is that people won't suspect that those innocent wallpaper images hold important documents. All you need to do is use the command prompt to combine the image file and your document or maybe a zip file with multiple documents. Accessing the documents is as easy as opening the image file with the compression software.

Learn basic cell phone photography techniques

If people don't 'like' your photographs as often as you would want them then it is time to introspect. Are your photographs appealing in nature? Do they follow photography principles which brings out the best

You don't always need a DSLR to get the best shots

in whatever is being clicked? If not, then you can hone these and more basic photography skills in a short amount of time. All you have to follow is a few simple techniques like rule of thirds, good lighting, image composition, getting better angle, Golden Hour lighting, using filters, not using flash, etc.

Windows tips, tricks and hacks

Want to get your work done faster in Windows or want to make customisations to suit your needs? Then follow a few tips, tricks and hacks like launching taskbar programs with your keyboard, quickly launching new instance of a program, using hidden international wallpaper and themes, assigning keyboard shortcut to any application, learn some command prompt tricks, add new locations to the 'send to' menu, access the hidden 'send to' menu, and much more. There is a long list of Windows tips, tricks and hacks out there, go ahead and try those out in your free time.

In an hour

If you have an hour to kill, then the following are the perfect skills to learn.

Learn Morse Code

It cannot be stressed upon enough about the importance of this skill. It can be a life saver at times, specially during emergencies. The Morse Code was invented was invented more than 170 years ago for the purpose of sending telegrams and is still used by amateur radio operators. Its most useful purpose is however for emergency signalling. You can transmit text information through Morse Code by using light, sound tones or clicks. Consider this,

If the world ever breaks down then Morse code could be back in all its glory!

you are lost somewhere on the mountains without communication and with only a flashlight, the only way you will be able to get your message across is if someone is able to see your Morse Code signals from miles away.

Learn basic HTML

HTML or Hyper Text Markup Language is the language that makes up the webpage that you view. In fact, Firefox OS for mobile phones uses HTML based apps. You don't need to be a coder to learn HTML, it is that simple to learn. Neither do need any special software to learn it. All you need is a simple text editor to write the HTML script and a web browser to implement

HTML is one the easiest programming languages to learn

it. HTML is made up of markup tags and an HTML document is defined by these tags. Each tag has a different meaning and holds different content.

Changing a car tire

Anyone who owns a car or drives a car must learn how to change its tyre. This skill should be treated more as a necessity than as an option as you never know when you may need this skill. It is not a difficult skill to learn but proper procedures must be followed for safety and tyre fitting. All you need is the spare tyre, a jack and a wrench. If done correctly, it can be easily done within an hour.

Learn the colour theory

This should be the choice for the creative one to learn a new skill in an hour. Colour theory is basically the guidance on mixing of colours and the visual effects of a colour combination. The theory states different categories of colours such as primary, secondary and tertiary colours. Colour theory basically gives a logical structure for colours. It has different segments like the colour wheel, the colour harmony and the colour context. Colour theory is very useful in the fields of painting, photography, web designing, video game designing and fashion.

Learn how to compost

Organic vegetables are quite in demand today as vegetables in the market are laced with toxic pesticides and other chemicals. If you have some open space within your fences, you can have your own kitchen garden where you can grow organic vegetables and fertilise them naturally with compost. Compost is basically natural fertiliser made up of decaying organic matter which can include organic waste generated in your own home. You don't need special equipment or experience to start your own compost.

Over a weekend

Have you have partied more than you planned this month and want to do something productive and useful in the coming weekend? Then engage in learning the following skills in weekends.

Learn Excel

In this day and age, one cannot afford to lack in spreadsheet knowledge as they make your work easier and much more quicker. Excel is one of the most popular spreadsheets out there and is used in almost all the industries from a small bakery to a large corporation. Excel can help you store, manage and analyse data, and helps you to create reports and charts. People with knowledge of Excel are also highly valued in organisations.

Learn Basic Pottery skills

Pottery making can be a lot of fun; you get to mould the clay according to you imagination and can make anything from a vessel to a decorative object, you are only limited by your imagination. You can either mould the clay by hand or with the assistance of a potter's wheel. It is then heated to a high temperature in a kiln to remove all the water, increasing

its strength, hardening it and setting its shape. Pottery is also decorated in several different ways.

Learn to code a simple website

You have always thought that certain websites could be made better and felt that you could do a better job. Unfortunately, you do not know how to create a website, but don't worry, this can easily be remedied over the weekend by engaging in the process of creating a simple website. This would be the beginning of your step into the world of programming. It will take a lot of time to become a skilled programmer but you can certainly understand the basics of creating a website.

Coding smoothly

There are a lot of things that developers can learn to make their coding process smooth, like versioning, where a developer can retrieve a previous version of a code that they may have recently overwritten. Another tool that is a constant companion to a coder is the text editor. A lot of text editors out there are capable of much powerful operations but are not used to their full potential by developers (e.g - Notepad++). Learning a database manipulation language like SQL also comes in very handy when your application works a lot with heavy data.

First-Aid and CPR skills

These are very important as you might never know you need them for yourself or for someone around you. You will learn things like identification of injury, caring for an unconscious person, learning how to give CPR. What you learn about first-aid and CPR over the weekend may very well result in you gifting someone years of life by saving them.

Learn First-Aid, you never know when you'd need it

In a week

There are plenty of skill out there that will make a huge difference in your social and work life. These skills require a bit more time

Speed reading

Speed reading is the art of assimilating text faster (some claim 300 % faster) than your normal reading rate. It tries to make use of your senses and brain more efficiently. This is not some skill that can be achieved quickly and will require time to adapt to as you will be trying to change reading practice which has been set in you since childhood. It utilises a few techniques such as chinking and sub vocalisation, and it requires a lot of concentration. This is a great skill to learn if your job involves reading vast amount of content.

Basic Psychology and Body Language

The ability to know what the other person is thinking just by looking at them, the ability to make the other person believe that they are leading the conversation while in fact it is you who is subtly steering it and the ability to convince even the toughest personality to see from your point of view - priceless. No, this is not mind-control we are talking about but the study of the mind's working, psychology and the study of the non-verbal method of communication, body language. The benefits of learning basic psychology

Are they talking the talk and walking the walk?

and body language can be immense in work, in family life, in leadership, in friendship, in basically every other relation where human communication is involved. You can learn enough in a week for use in your day to day life.

Basic Graphology (Handwriting Analysis)

Graphology is the analysis of physical characteristics of handwriting to identify the personality characteristics or the psychological state of the writer at the moment of writing the analysed piece. It is basically another way of looking into the mind of a person and has applications in psychological counselling, compatibility assessment, determination of intelligence levels, etc.

In three months or less
Basic mixology (cocktail making)

Mixology or cocktail mixing is one social skill that is sure to get you plenty of brownie points at any party or make you the party host that everyone looks forward to. Basic skills can be learnt in three months and an advanced course can be completed in six months. You can never go wrong with this skill and it is sure to make you the centre of attraction of parties.

We know you need to practise, but don't drink it all up

Calligraphy

Calligraphy is a visual art of writing in such a manner that it is visually appealing and artistic in nature. If you know calligraphy, you can make

amazing gifts using it; imagine gifting a personal letter written in calligraphy on a scroll. Calligraphy requires intense concentration to style the characters. Calligraphy sets in all budget ranges are available in the market.

Basics of a new language

Three months is not enough to learn a new language fluently or be grammatically correct for that matter, but it is good enough time to develop conversational skills in it. Learning a new language has many other benefits apart from the social ones, like impressing people, talking to the locals in their language, increasing your employability, etc. It boosts brain power, increases concentration, and more.

In a year
Parkour

Move over every other fitness technique; parkour has arrived. It is the art of rapidly moving through an urban environment and negotiating obstacles by running, jumping and climbing. When you are engaged in parkour, you won't feel any less than Batman (without the gadgets) as you negotiate some tough obstacles that normally one couldn't think of taking on. Parkour is not

Parkour - a highly strenuous form of activity

just for fun, it keeps you physically fit in ways better than a gym as you also develop good flexibility and an alert mind. A year is should be good enough to learn (level up in) parkour perfectly, provided you are serious about it.

Mountain bike trials

If you thought parkour was cool then take a look at mountain bike trials, once you start, the adrenalin kick will never let you go back to a normal life. Mountain bike trials, also known as observed trials, is a type of mountain biking where a rider attempts to pass through several obstacles without putting his or her foot to the ground. It is a tough sport and tests your bike-handling skills. For example, they jump from one rock to another rock on their bikes without getting off of it. Trial bikes have a tough frame and are made specially for this sport.

Spelunking or Caving

Spelunking, also known as caving, is an adventure sport where you explore non-commercial cave systems. The adventure factor depends on the type of cave that you choose; there are caves that you can go strolling through and then there are caves where you will have to crawl through. Cave systems are like subterranean ecosystems of their own with maze-like passageways, waterfalls, ponds, rivers, beautiful natural structure and some really strange creatures. The ambience of some of the caves might remind you of creature movies. The thrill of going through dark cave systems, not knowing what to expect at the next corner, sends the blood rushing to your brain and your heart beating with a primal thrill. Just like any other adventure sport, spelunking has its own specialised equipment and difficulty levels.

We suggest getting a good instructor for this one

White hat hacker (Ethical hacking)

This is one skill that can help you change your career track. White hat hackers hack a system, with the owner's consent, to expose the flaws so that they can be patched up before they are taken advantage of by Black Hat Hackers (the dark side). The thrill of having such immense and intricate computer knowledge is almost 'matrix-ish'. Becoming a professional white hat hacker will take a lot of dedication but if you have it in you then by the end of a year you

will know quite a lot and can go ahead to becoming an expert in the next few years. To begin, you need to have basic IT skills, basic knowledge of the Windows and Linux operating systems and basic networking skills.

There are a lot of skills out there that you can learn and still more new ones keep emerging. In the end it depends on your liking and requirement as well. Also, choose a skill which you think will be handy down the future or simply something that gives you great memories.

NO ONE FORMULA FOR ALL

Each MOOC provider's course varies by a little bit and you need to figure out which one is best suited for you

Brave New World for Learning

Learning has changed rapidly in the last 10 years with the growth of technology. In India, distance learning slowly picked up in the 1990's and since then it has grown manifold. Nowadays, the material used for learning is not just limited to study notes and companion textbooks. Instead, audio and video materials are also incorporated into the course curriculum. With the evolution of YouTube, many educators have begun to upload their own training material for users to browse. We currently have several thousand videos on a wide range of topics starting from technology to cookery on popular video hosting portals such as YouTube, DailyMotion and Vimeo.

We cannot avoid the use of computers in the current era. You need access to computers to perform daily tasks. You need to learn how to get the best out of them by joining a relevant course suitable for your requirements.

IGNOU, popularly known as People's University, offers a wide range of long and short term computer courses. The advantage of the BCA course offered by IGNOU is that students can take a maximum of 6 years to complete the degree. If you would like to learn computer basics quickly, you can join the job oriented six months Certificate in Information Technology (CIT) program.

The Diploma in Computer Applications (DCA) offered by the Directorate of Distance Education, Annamalai University lets you complete the course in one year with a fee lower than that of IGNOU. The course instructs you in Microsoft Office and C in addition to office automation tools. The university also offers semester based PG Diploma courses that cover Java, Web designing, C++, Oracle and Visual Basic.

Distance Education Certificates will be the same as Regular College Going Students

The LBS Centre for Science & Technology located in Trivandrum offers a 70 hour crash course in Office automation and Internet. The institute also offers several hours long short term courses in Microsoft Office, Data Entry (both English and Malayalam), C++, Java, . NET Framework and Computerized financial accounting using Tally. The Karnataka State Open University conducts M.Sc (Online Mode) and Executive MBA programs in addition to PG Diploma in IT.

Aptech, a reputed private computer institute, offers a short term computer course spanning 396 hours. The course covers all aspects of computers, Internet, C, C# and Java in addition to Cloud Computing. However, you need to personally attend the classes to complete the course. Several reputed institutes such as NIIT also conduct several short and long term courses based on the latest technologies.

Apart from Computer & IT related courses, there are home study courses in Management, Finance, English and Freelance writing. Veta, a Chennai

based education company, conducts distance education courses in foundation, fluency and business English with special focus on accent training, personality development, group discussions in addition to interview techniques.

Who should opt for distance education?

The distance education platform is suitable for students who have completed higher secondary courses and are unable to attend regular colleges. It is useful if you want to procure a university degree certificate after the completion of the course. Moreover, this platform is useful for students who work during the day and also for individuals who look after their households full-time.

With distance education, you can complete a degree from a university even if you reside in a state where the university is not physically located. Hence, this platform is ideal if your work involves frequent transfers and travelling. The Veta English language courses are ideal for students preparing for competitive examinations and interviews.

Pros - Flexible, Affordable, No Age Limit, Printed Study Materials, Contact Classes, Regular degree certificates
Cons - Lack of Instructor support, Out-dated study materials, Inappropriate contact class timings, Missing campus environment

Enter the World of Online Learning

With the rapid growth of broadband Internet, educators have started to tap into the Web to introduce courses which can be accessed from all over the world. In e-learning, you will have complete freedom as to what and how to learn. You will be able to learn from an extensive catalog of courses and can complete courses at your own pace.

Pluralsight offers a wide collection of courses under several categories in association with reputed authors. At the time of writing this, *Pluralsight* has over 1,400 courses in its emerging catalog ranging from Developer, Microsoft, IT, Web, Creative, . NET, JavaScript in addition to free courses for kids on Scratch programming, HTML, Hopscotch app and basics of Photography. You will have an opportunity to learn other courses such as Resume Development for Technical Professionals, Management 101, Becoming a Better Listener, Resumes and Self-marketing for Software Developers, Preparing For a Job Interview, Best Practices for Project Estimation in addition to computer and IT related courses.

WintellectNOW provides several free and paid courses related to computers, HTML, . NET and other related topics. The courses are primarily oriented for the developer community and their catalogue is not extensive when compared to *Pluralsight*. For instance, you cannot learn resume building while learning Visual Studio since they don't have a course on that particular topic.

Lynda.com enables you to learn specific topics separately with an option to access transcripts both in text and audio formats. For instance, you

Learn Anything at the comforts of your Home

can choose to learn JavaScript functions and events separately. This will benefit those students who have prior training in JavaScript and would like to refresh their knowledge base. However, these courses run between 2 to 3 hours and hence, it may not be feasible to spend two valuable hours to learn only a particular topic, when Pluralsight offers a full JavaScript course with the same time frame.

OnlineVideoLecture.com has an extensive collection of free video tutorials hosted on YouTube. For instance, the C++ Console course has over 54 videos. You can choose any video based on your experience level.

WatchKnowLearn.org has several videos on a wide range of topics curated from various sources. *CosmoLearning.com* has a collection of numerous free video courses streamed from YouTube. In addition to computing, the site includes several courses in various other disciplines such as Journalism,

French, Medicine, Spanish, Entrepreneurship and engineering streams.

If you would like to learn JavaScript, HTML and databases in less than one hour, Khan Academy Hour of Code will be an ideal fit for you. These courses examine the various steps required to complete a specific task with the help of coding and videos, which will be ideal for school students.

Coursera.org has a huge collection of courses in languages in various disciplines other than English, which will be beneficial for students who are not familiar with English. Moreover, the courses are authored by university professors and students will have an option to receive a verified certificate from the university which can be shared on LinkedIn.

The Naukri FastForward e-learning portal offers 69 job related paid courses on HTML5, Python, Java, ASP.NET, PHP, Cloud computing, Joomla and many more. These courses will be useful for employers to impart coaching for new recruits, thus cutting down on the overall training costs.

Learnnowonline.com is a popular on-demand learning portal which offers courses related to programming in addition to web design, Windows 8, HTML, CSS, Salesforce, Mac OS X and Microsoft Office. The site is slated to release a course on WordPress soon.

Some of the other popular video based e-learning providers are

Mathematics is no longer a difficult subject

academicearth.org, *brightstorm.com*, *edx.org*, *howcast.com*, *archive.org*, *neok12.com*, *videojug.com*, *opensesame.com*, *kalliance.com* and *codeschool.com*. For instance, *howcast.com* has a video which helps you learn how to use Twitter in less than two minutes.

If you would like to learn Mathematics, MathTV is an ideal destination. The site is completely dedicated to Maths and covers Algebra, Geometry, Trigonometry and Calculus. An instructor personally teaches you the various concepts by writing on a whiteboard.

In addition to traditional distance learning, IGNOU also provides course materials in audio and video formats which are available for purchase separately. They are not available on demand but you will be able to learn the concepts using the provided CD at any time.

Udemy.com includes several free and paid courses on IT & Software. The courses hosted on Udemy are also available on Android and iOS devices, which enables you to access the courses on the go.

Mumbai based *Questpond.com* has a huge collection of videos related to .NET and related technologies and are available in both online and DVD formats for a nominal subscription.

WorldAcademy.TV conducts courses in marketing, sales, entrepreneurship, leadership, fitness and even cookery.

The computer skills curriculum provided by *e-learningforkids.org* includes courses on Microsoft Word, Excel and Power-Point, which are specially designed for kids. The site also includes a course which teaches kids the concepts related to using Internet safely.

iDaa Learning provides interactive education CDs in all major subjects for standards 1 to 8 including preschool lessons. These CDs will help students

Help your kids to learn with Computers

quickly learn concepts in an interactive way and can be used even without Internet connectivity.

Victers TV channel, an initiative of IT@school, Government of Kerala brings school education to your drawing room.

All web based courses consist of slides followed by audio commentary in addition to supplementary lessons in PDF format. In case of Programming & IT courses, you will be able to learn with the help of videos. This will enable you to grasp the content quickly.

A one year subscription to web based courses from providers such as Pluralsight includes access to both existing and upcoming courses. However, you can also sign up for a free trial to ensure that the courses meet your requirements.

Who should opt for online learning platforms?

Online learning will be beneficial if you would like to learn from the comforts of your own home without any need to travel. If you have earned a degree and would like to gain more knowledge on a wide range of computer and IT related topics, you can purchase a suitable package from the various web based course providers. All e-learning courses offer a free trial. Hence, you can quit at any time if you find the courses are not suitable for you.

Online learning will be useful for students who have a capability to grasp concepts with little instructor support. You can learn from anywhere in the world provided you have access to a computer and broadband Internet. Several providers have started to produce lessons which are compatible with tablets. Hence, you will be able to learn on the go without carrying bulky laptops.

Pros – Rapid Learning, Simplicity, Travelling not required, Latest study materials, Onscreen Visual Demonstrations, Access to wide range of courses
Cons – Unreliable, Unable to download content, Accent Problems, Lack of Direct Student/Instructor Interaction, Inappropriate for less bright students, Lack of Awareness, Lack of Internet Connectivity in remote areas hamper learning process, Payment Method Issues

Experience Learning with Audiobooks & Podcasts

Audiobooks and Podcasts have existed over the last decade or so. Through this platform, you will learn various concepts by listening to audio either

via computer, smartphones or MP3 players.

Techguylabs.com includes several podcasts on Business, Gaming, Hardware, Media, Internet, Software, Tablets, Photography and Wearables. The episodes are directly rendered on the screen by the presenter and spans over 2 hours. The episodes will be only useful for those people who have the time to listen to them.

Some of the other popular podcast resources are *banselminutes.com*, *dotnetrocks.com*, *altnetpodcast.com*, *aspnetpodcast.com*, *polymorphicpodcast.com*, *deepfriedbytes.com*, *javaposse.com*, *openwebpodcast.com*, *podcast.rubyonrails.org*, *channel9.msdn.com*, *se-radio.net* and *thesoundof.net*.

The Basic HTML course by Joe Struss consists of a set of iTunes compatible audio files which you can listen to using any iOS device. The Skybrite iOS app includes thousands of audiobooks and courses which are streamed

Listen & Learn via Audiobooks and Podcasts

from the web. The Android Play Store and Windows Phone Store includes a lot of audio based learning material oriented for kids, business etc. on topics like web designing, safety and others.

Who should opt for audiobooks & podcasts?

Audio courses will be useful if you have an ability to learn without any assistance. This is because you are only listening to the instructor's voice and unable to watch his activities. Hence, you require all the required tools

such as a computer and the required software to learn properly. For instance, if you had downloaded an audio course on HTML, you need to perform all the steps outlined by the trainer on your own.

Audiobooks and podcasts will be useful for general courses such as resume building, soft skills and to know about the new features of a product. For instance, you can listen to a podcast which examines the new features introduced in Windows 10.

Pros – Simple, Ability to download audio files, Compatibility with various devices, Access to courses on the go
Cons – Shortage of courses in all topics, Lack of slides and visual demonstrations, Unable to follow content rendered in a fast manner, Accent Issues, Inability to pause learning

Conclusion

The future is bright for both students and educators. As someone interested in learning, you should pick a platform which suits your lifestyle and requirements. Web based learning has opened up job opportunities for instructors since they can upload their own courses. You have several learning resources at your disposal apart from traditional text and library books. However, many people don't know about them. An awareness campaign should be conducted in schools and colleges so that both students and teachers get to know about the endless possibilities available on the web.

GROUP THERAPY

Getting a few heads together is always better than going about it alone, especially when it comes to learning

The web has opened immense possibilities. You can not only learn new technologies but also share your knowledge with others. Groups enable you to gain knowledge and friendships. Hence, you can expand your presence globally.

In order to gain more knowledge and connections, you should join groups so that you will be able to get expert advice from other persons. For instance, if you join a group based on *.NET*, you will have an opportunity to mingle with several software engineers. This will not only help you to gain additional knowledge but also help clarify any lingering doubts quickly.

Suppose, if you are learning ASP.NET from a reputed computer training center and you got a doubt on Saturday. Prior to groups, you will have to wait till Monday to ask your instructor to know about the possible solution. If you post the query on either a newsgroup or web based group, you will get instant answers from people who have been working with ASP.NET. Sometimes, you will get a reply directly from the product team.

Groups exists both online and offline. The online groups make use of web based dashboard to interact with users. In offline groups, you will communicate with fellow members physically.

Newsgroups

The whole concept of groups started with Newsgroups. They are basically discussion groups where users post queries. There were newsgroups for each and every topics, subjects and technologies. Newsgroups were initially started by a group of students of Duke University in 1979 with the launch of a Unix group. The students thought of a need to start a platform for interaction. Usenet was originated after this development to enable students and users to read and respond to messages.

Newsgroups are the best places for online consultations

The Face of Usenet Newsgroups

Newsgroups were popular prior to the rapid emergence of the Internet. According to reports, there were around 20,000 active newsgroups around 1983. Microsoft newsgroups were famous during the year 2000. Programmers started to make use of newsgroups to find solution to their daily problems. An interesting fact about newsgroups is that you will get an opportunity to communicate with people who are more or less involved with the same line of topic.

Stanford University provides free access to Usenet newsgroup for all classes. Newsgroups hosted by University of Waterloo can be accessed via news.uwaterloo.ca. Join one relevant for your course.

In order to read and reply to messages posted under a newsgroup, you need to download newsreader. Microsoft Outlook Express (Currently deprecated) was once a favourite tool for all users, who actively participate in

newsgroups discussions. You will be able to read the messages even if you are offline, which is not possible in web based discussion forums.

Free Agent is an alternate newsgroup reader software which has support for multipane viewing, article purging, database compacting, carbon copying in addition to cancellation of posts. DMOZ has links to several articles which examines the steps required to create newsgroups.

Harley.com (Harley Hahn) has provided a master list of all Usenet Newsgroups. You can either search for a group based on the keyword or automatically select a group from the list of categories.

View how Newsgroups appeared in Microsoft Outlook Express

Newsgroup Service Providers

There are several providers in United States who provide Usenet newsgroup access services. You will need to pay recurring monthly charges to continue the service after free trial period. Some of the leading newsgroup providers are Usenet.net, UseNeXT.com, Giganews.com, NewsDemon.com, Fastusenet.org, Supernews.com and ThunderNews.com. These services provide required amount of disk space and connections with a facility to retain the messages for a specific period of time for any time access.

You will be able to access various groups with the help of provided newsreader software which can be installed on your computer. However, most of the newsgroups became obsolete with the rapid evolution of web based discussion forums.

Hosted Group Providers

If you would like to quickly setup a group, you should register with web based free or paid hosted group providers.

Meetup.com helps you to know about various groups nearby your locality. You can search groups based on location, categories and distance from your current place. For example, if you search for Trivandrum, you will be able to view a list of all groups nearby the location. You will view details of the group such as members, photos and discussions upon selecting a group. You can create your own group by selecting the link titled Start and following the on screen instructions.

Locate a Group near your Locality

MEETin.org helps you to create and manage groups easily free of cost. You will be required to pick a city from the list provided. The site provides support for all major cities in addition to Bangalore. The signup process is easy and it only requires few fields to be filled in.

Wegodo.com enables you to connect with people via Android and iOS app. However, this service is available only in USA and UK, but you can bypass geographic blocks through a VPN tool.

Bigtent.com helps you to create and search for a group based on postal code or group name. However, the service is currently limited to United States.

GroupSpaces.com enables you to create a group based on your requirements. The free plan provides a capacity for creating a group with 50 members with 2 member lists and 250 MB file storage, which is sufficient for
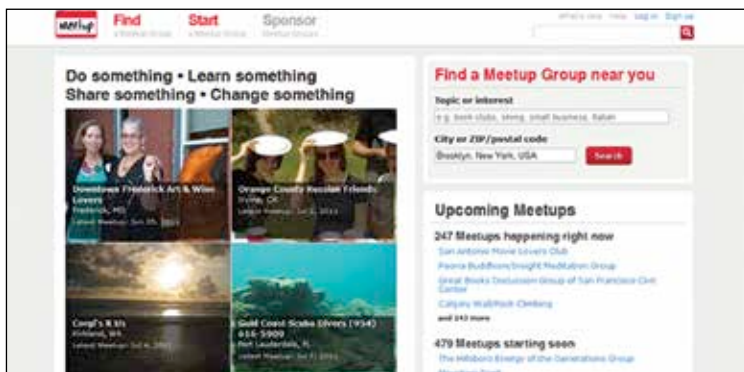
Groups that allow people to meet in real life exist aplenty

small groups. You can also search for a group based on relevant keywords, city and postal code.

GroupLoop.com provides a facility to create and manage groups with an ability to share files. The site also includes a messaging mechanism and calendar module with which you can organize groups effectively. The site will be useful for private clubs, companies and families.

Eventbrite.com enables you to invite your group for a meeting. For example, if you run a group for Java programmers, you can invite all members for a monthly meeting. The service is completely free as long as you are not charging users to attend an event. It is also compatible with mobile devices and hence you will be able to know about events on the go.

Invite your Group for an Event

SureToMeet.com enables you to create meeting registrations, email invites and organize events. The service is free for group meetings and events without credit card registration.

Hoop.la provides an ability to create groups and content with a wide range of types such as blogs, forums, surveys, chats, events, images, videos and private messages. You will be able to use your own themes and navigation menus. However, the service is expensive but you can subscribe to 30 day free trial.

Ning.com enables you to create groups and sub groups with forums, blogs, social media support. Moreover, the service is compatible with mobile devices and includes a drag and drop builder with privacy control and moderation support. The service is paid with 14 day free trial.

Forums provide real time interaction with people. You can now create a free web based forum for your community with Zetaboards.com. It includes customization features which enable you to change the look and feel of your forum. The company offers free support via tickets and also through a comprehensive documentation. The site also provides a forum directory where you can find other communities similar to your topic area.

Vanilla Forums offers both cloud hosted and self-hosted platforms, which is available free of cost. You need to download the source files and install it on a shared server by following their instructions. However, you have to pay a recurring amount in case if you opt for their cloud hosted platform after the expiry of 30 day free trial. It includes several premium features such as Q&A, mentions, notifications, avatars, private messaging in addition to migration services.

Events let you meet and greet people like you would in the good old days

Grou.ps is a free and powerful group creation service with which you can drag and drop modules and menu items to create pages for your group. It includes around 70 templates, 15 apps with support for moderation, monetization and social media integration.

Wiggio.com has a customer base of over 1,50,000 groups. You will be able to host virtual meetings, conference calls in addition to management of tasks, events, files, emails and voice messages.

Nowadays, organizers have started to make use of Facebook, Twitter, LinkedIn and Google+ to manage groups. These social media platforms enable administrators and members to post and share content, links, images and videos free of cost.

You can create a separate group or page for your community on Facebook. You need to login to your Facebook account, scroll down to find an option named Create Group or Create Page and provide all the required

information. You can either create a public or closed group. If a member joins a closed group then you will have to approve the request to enable the user to view content. Techism group is a classic example of how members share their knowledge on technology and gadgets.

Choose the Visibility of your Facebook Group

With the help of Twitter, you can create lists for your groups. You can add members to the list, which will grow over the period of time. The messages can be shared with the help of hash tags. For example, if you run a group for Java in Trivandrum, you can use #java, #trivandrum, #javatrivandrum tags, which will ultimately improve the visibility of your message. #Indianbiz-party is an example of how entrepreneurs and startups make use of Twitter to discuss latest business related developments.

See How #Indianbizparty is Trending on Twitter

LinkedIn also enables you to create groups and is widely used by IT professionals. You will be able to join a group by simply sending a request. Moreover, you can view a detailed list of all groups.

There are several communities functioning on Whatsapp,

Facebook Groups are more relevant for 21st century

which enable you to create and manage groups via mobile.

There are offline groups as well like *several .NET* User Groups which exist all over the world and in India. The *International .NET* Association (ineta.org) is the core body of *all .NET* groups, who maintain a list of all speakers which include Microsoft MVPs, Software Architects and Developers. The main activities of include conduct of monthly meetings, yearly

Trending topics on twitter aren't an accident, but thanks to large online groups conversing

conferences in addition to online discussion forum for interaction with community members who don't have time to participate in meetings. As of the time of this writing, there are around 264 *active .NET* groups around the world with groups in Bangalore, Chennai, Pune, Delhi and Trivandrum. A search on meetup.com with the *keyword .NET* returns several results of *various .NET* groups.

Pros - Easy to use, Support options, Possible to find other groups and establish connections, Direct interaction possible (in case of offline groups)

Cons - Fear of closure, Migration problems, Limited resources and customization possibility, Travelling difficulties

Creating Your Own Self Hosted Group/Forum
Once upon a time, Microsoft had several newsgroups related to Internet browsers, Internet servers, Web content development, Programming, Languages, Databases and Security. However, Microsoft has already migrated most of their newsgroups to the popular web based MSDN forums which enable community members to interact effectively.

Discussion forums are web based groups formed to provide help and assistance for a wide range of topics. As of today, there are several forums available for all major topic areas as listed below

You can easily create and establish forums similar to above mentioned links with the help of several web based discussion forum software scripts such as phpBB, vBulletin and DotNetNuke. In order to create and activate your group with the self-hosted software, you need to purchase a domain name, shared hosting space (Linux or Windows) from a web hosting provider and install the required script from with the Softaculous module in CPanel.

Manage Your Own Self Hosted Discussion Forum

In order to establish your own group with above mentioned scripts, it

Topics	Links
Agriculture	farmnest.com, farmingforumsite.com, dairy-forums.com, farmingforum.co.uk
Business	businessadviceforum.com
Computer Hardware	tomshardware.com, erodov.com, forums.anandtech.com, hardwareforums.com, hard-forum.com, hardwarecentral.com
Education	edutopia.org, edweek.org
Medicine	patient.co.uk/forums, healthboards.com, healthyplace.com, healthfitnessindia.com, sukh-dukh.com, medhelp.org/forums/list, ehealthforum.com, exchanges.webmd.com, medicalgeek.com
Elearning	elearningguild.com, lectora.com/forum
Sports	sportshoopla.com, cricketweb.net, football-forums.net, totalfootballforums.com, planet-cricket.org
Technology	techenclave.com, techist.com, techforum4u.com, forums.techguy.org
Technical Support	techsupportforum.com, bleepingcomputer.com, cybertechhelp.com
Gaming	indianvideogamer.com, avforums.com, gamespot.com, videogamer.com, ng-gaming.net
Science	Scienceforums.net, physforum.com, science-chatforum.com
Windows	Sevenforums.com, Eightforums.com, tenforums.com
Linux	linuxforums.org, ubuntuforums.org, linuxforums.org.uk, forums.justlinux.com
Web Hosting	webhostingtalk.com, forums.digitalpoint.com, hostingdiscussion.com, hostingdiscussion.com, forum.webhostingbuzz.com

requires lot of effort and time. Moreover, you need to spend more time to learn the usage of the platform rather than getting started to work with the site.

Pros – Complete freedom, Customization, Possible to monetize site with advertisements

Cons – Difficult to setup, Troubleshooting issues, Handling server downtime

Create your own forums if you don't like any existing online groups

Conclusion

Groups are a powerful medium to interact with community around your locality. In future, all groups will be established through popular social media platforms due to the simplicity and freedom it provides. There will be a steady growth of hosted communities but people will find it risky to manage a group through it due to fear of shut down. You should remember how Orkut died peacefully in 2014. Millions of group members lost their connections as a result of closure. The emergence of Facebook and Twitter provided a much needed boost to communities around the world. However, we cannot predict the future. As a community administrator, you should

select a platform which is suitable for your requirements. While the self-hosted platform provides complete freedom, hosted platforms are simple to use and manage. We hope social media will overtake all other available group platforms in the upcoming future, which ultimately establish great connections, friendships and knowledge.

WALKTHROUGH LEARN CODING

This one's a little obvious but nevertheless something that's all the more relevant in this day and age. Here's how you can go about learning how to code.

Corporates and individuals have started valuing coding knowledge in the last few years, which can be attributed to the popularity of smartphones, growth of the World Wide Web and, of course, the boom in the IT sector. Tech-giants are also ready to give out fat paychecks to programmers who are efficient and have mastered this skill.

Considering the expanse of the Internet, no technology or science is hard to learn if you choose to put in the appropriate amount of effort and give sufficient time to skill development, so is the case of coding. With the humongous amount of material available online, this shouldn't be a hard task.

The Internet is full of coding tutorials courses, which are absolutely free of cost. Even though some organizations charge minimal fees for courses and certificates, still the main focus is on developing the skill rather than acquiring the certificate.

The growth of IT industry has led to a major demand of coders.

If you wish to learn the art of programming, you need to invest some quality time as well as efforts. In order to learn the basics you will need 2-4 weeks, considering you practice daily. But if you want to learn advanced concepts, you need at least 12-16 weeks after which you need to revise your concepts and sharpen your skills regularly and you need to do this for years in order to become an expert.

The amount you will have to shell out to learn coding may vary according to your choices. You can even learn to code at no cost at all with the help of online tutorials. These tutorials are absolutely free, but if you wish to do a certificate course, you may have to spend ₹5,000 to ₹30,000 approximately. This isn't a fixed amount, since it varies with companies and courses.

Before you start coding, make sure you have the required resources in order to avoid any hassles later. You will require a working PC with an Operating System (OS) of your choice and an internet connection. The choice of OS plays no role in your coding practice. In addition to this, you will require a compiler depending upon the language and technology you decide to take up at the next stage. And, of course, a strong will to succeed at the task you take up. So pack your bags, because this is going to be a long ride.

Where to start?

First things first, decide whether you wish to go in for coding as a career or to learn it just as an art. It's good to have a clear mind-set before you start.

If you have had some exposure to the world of programming, you would have heard the names of various languages, from C to C++, and from Java to Python. Each of these languages have a specific domain, for which they are used E.g. Android particularly uses Java, if you wish to make an Android app, you need to essentially learn Java. So if you have picked the domain already, you can take up the language accordingly. If not, just stick to C

Python is preferred as a beginner language because of its relatively simple syntax and structure.

or Python for the moment, and you can jump on to others, as and when required. Wasting too much time on just deciding a programming language is useless.

Additionally, keep a mindset about the type of programming you wish to do. Your choices may include web design or development, Android app development, iOS development, desktop app development and the list goes on. The classification can be further diversified as distributed applications programmer, framework/library programmer, system programmer, which may have further classifications. Broadly, you have two choices as a programmer, that is to go into design or development. If you opt for design, you will have to deal with visual aspects of the programs, from user interfaces to elementary animation; meanwhile if you opt for development, your job

will be to build and maintain the backbone of the application. Analogous to a car, design can be related to the outer frame, and development, to the engine. Both are equally important and essential for the application to function smoothly.

Once you have decided upon the language and a domain, get a handy compiler or IDE (Integrated Development Environment) to avoid frustrations at later stages. If you have decided upon C or C++, Code Blocks might come handy, since Turbo C (The one with the classic blue screen) doesn't function properly on modern computers. If you are going for Java then NetBeans or Eclipse would be suggested. For any other language, find an appropriate compiler as suggested in your course, or if nothing seems to work, online compilers come in handy. You can try *ideone.com*, which supports almost all languages. If you are from a Linux background, command line compilers will work the best. Keep in mind that for developing certain applications just a compiler won't be sufficient, other tools might be required. For E.g. Android requires SDKs (or Android Studio), if you wish to develop apps. So make sure you have these before you actually start the development.

Coding is a skill, which needs self-development, rather than someone imparting it to you. But still, to start off you need some guidance. It is a matter of choice whether you wish to opt for an online or offline course. Each of the methods has their pros and cons and you may choose the one which suits you the best.
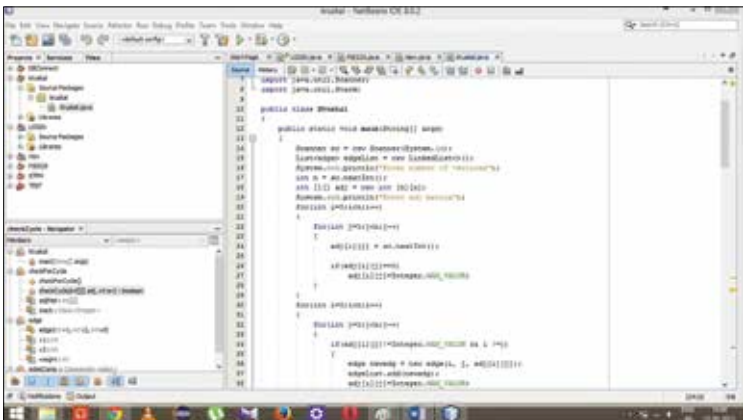
NetBeans is one of the most popular Java IDE, the other being Eclipse.
Should I go for an online or offline course?

Online courses are hassle free and can be taken from anywhere in the world

- If you wish to go for an offline course, a quick Google search regarding "computer classes in <my city name> " will yield you tons of good alternatives. Make sure you take up a good institute which has an experienced faculty; because of the mushroom growth of computer centres, quality of education provided by them might be a major concern. Still, offline courses provide a personal touch and you can get your doubts cleared immediately.
- On the other hand, most of the online courses are offered by acclaimed universities and have experienced faculties too. But the major con of this method is that the entire learning procedure is virtual. Though some online courses let you readily interact with the instructor or the course-coordinator, this interaction might be limited and you will often have to rely on Google to get your doubts cleared. Keep in mind that most of these courses are taken up globally at the same time, so occasionally timings might be erratic.

How to begin the skill development?

In order to begin your coding basics, you can take up an elementary course at any of the MOOCs, be it Khan Academy, Coursera, MIT Open Courseware or Udacity. It should be noted that these are not the only course providers,

you can take up courses by many other tutorial services. Some of these might require fees and may provide certifications on successful completion of the course, while others may be absolutely free of cost and may or may-not provide certification. This decision is totally up to the candidate opting for the course and is a matter of personal choice.

It is always preferred to take up a course that supplements learning with video lectures and illustrations, although they may not be always necessary. Don't rely entirely on the lectures, rather try to dig deeper and clear your doubts. You may use *YouTube* or *Wikipedia* or any other website like *tutorialspoint.com* that can provide you with some more information on the course which may have been overlooked in the lesson. But, the more you search around, higher are the chances that you may get distracted, so be focused

Learning via MOOCs is easy as well as flexible

and try to concentrate on the learning part. YouTube suggestions may sometimes cause you to end up totally off-course from your subject matter.

If you don't wish to enrol for an entire course, and want to learn in bits and parts, numerous websites provide step by step guidance. W3Schools provides good elementary examples with tutorials where you can learn quickly. Adding to this, there are many YouTube channels, which can be

helpful in quick-understanding of logic or algorithms. For the offline course, the process remains pretty much the same. Try to dig into the basics, which teachers often overlook considering them to be unimportant.

Now that you have actually started the learning process, focus on basic and core concepts. For every language the elementary step is the "Hello World" program. Start with this and then move on to core concepts. Understand how a code works, its flow of execution, how variables are declared and what are their data-types. Next term to focus on would be 'syntax'; these are the basic grammar rules for every programming language. A computer won't understand your code if it does not follow the syntax rules. So it is understood that you will have to memorize these syntaxes, to write code for any problem. Though modern IDEs automatically correct syntax, it is still preferred that you learn them. It is always good to practice along with the learning procedure. Learn a concept, apply it practically and then move on to the next concept; mugging up too many theoretical concepts at a time won't help you anyhow.

Expanding your knowledge

Once you are through with your basics and you wish to move ahead, try to focus on advanced concepts. Learn the concepts of arithmetic operations,

Hello World is used to explain the basic syntax of a programming language to beginners

conditional statements, and functional programming and loops. These are the most important concepts of programming and your code's logic will essentially be made from these elements.

Find methods that will improve your code and learn various approaches that will help you solve a problem easily and efficiently. Study what are data-structures and their various applications in computing. Concepts like recursion can really help you understand programming from a new point of view. Considering you know what a function is in a program, recursion can be defined as a concept where a function calls itself. Recursion not only

Java is the most popular Object Oriented Language followed by C++

reduces your work, but it also utilises more of machine power. Fun fact, try to Google 'recursion'; it might help you understand it better.

One of the most common approaches to write code is object oriented programming (OOP). It is a programming model where we try to build real life entities inside the program (virtually, of course). For e.g. we may try to represent a car in our program using attributes like seating capacity, type of car, model etc. Or we may generalise it to define a vehicle, with attributes

like two-wheeler or four-wheeler, transport or passenger. This representation is done using classes and each instance of a class is called an object. For e.g. Maruti 800 can be represented as an object/instance of the class 'car'. A lot of current programs and applications are based on OOP.

- In-order to strengthen your skills in OOP, work on the concepts of
- Abstraction
- Inheritance
- Encapsulation

These are the three pillars that support the entire model of OOP. You can learn these concepts in depth in your respective courses. C++ and Java are the most common OOP languages; opposed to this, C, Pascal etc. are procedural languages and they don't follow the Object Oriented approach.

By the time you are done with these concepts, you will be able to solve some basic and elementary problems. Now the main focus should be to solve complex problems and to make your code fast and efficient. Whenever a code runs on a machine, it will take up some memory and time to finish the execution. Our aim is to reduce these parameters, so that it runs quickly without taking up enormous amount of memory and time, thereby reducing the overhead on the CPU. This process is called optimization. As the problems become complex, they require more amount of time and memory, hence optimization plays a major role in deciding the quality of our code.

A lot of programming approaches have been proven and used by algorithmists so as to optimise the code. Some of these algorithms can be enlisted as Greedy Algorithm, Dynamic Programming, Divide and Conquer, Backtracking etc. These algorithms are specifically designed to solve problems, so that we require less time and memory. Often we have to compromise time over memory or vice versa. For eg: Divide and Conquer breaks the problem into smaller parts and solves them individually; later these parts are joined together to form a complete solution. It is generally preferred because of its ability to solve complex problems by breaking them down into simpler and easier problems. Similarly, each of these algorithms has their own set of advantages and disadvantages, and have a specific domain of application. If you can master these algorithms and learn their implementation in complex problems, it will be very easy to get a good job because tech-giants look for candidates who are experts in algorithms.

One of the most challenging part of a program is a bug, which can explained as an error, flaw or an anomaly in your code, which causes unex-

pected behaviour from a program and an erroneous output. Hence an essential task is debugging i.e. to remove such anomalies. Even a specialist programmer may get stuck somewhere for days because of a bug. In general, if you wish to improve your debugging skills, start thinking of ways to fail your program deliberately. Check the edge cases of your conditions and try to dig deeper into the program and use print statements after every data manipulation. Consider every bug or error as an opportunity to learn something new.

Developing the art of programming

Now that we have an idea of what has to be learned to be good at coding, we will go about the process of how to achieve the aforementioned tasks. Like the good old saying goes, "Practice makes you perfect" which stands true for programming too. Just like a cricketer, a programmer needs to have net practice regularly. Just learning the concepts and keeping them in the closet is the last thing a programmer should do. In order to maintain your skill, make programming a habit, not just an activity. Start relating problems in your daily life with a programming problem. Try solving these day-to-day problems with the help of programming techniques.

There are a number of websites that can help you develop and maintain your coding skills, which are known as online judges. Some examples of

Coding needs practice as well as concentration

these are CodeChef, SPOJ, UVa or Codeforces. These are online compilers that can compile and execute programs. Furthermore, the judge runs the code with strict time and memory constraints and tests it on pre-constructed test cases to evaluate the code. These judges have a number of problems which are sorted according to the level of difficulty or number of successful submissions. Start with easy problems and gradually you can move up. Often you may come across problems where you are required to learn a new algorithm or a technique to solve. These websites also offer discussion forums and editorials, in order to make learning easy and efficient.

In addition to forums, these sites run coding challenges also known as hackathons. These challenges give a fixed amount of time to solve problems where the time duration may vary from a few hours to several days. Often companies hold their own hackathons as a hiring challenge. These challenges help you increase your coding speed as well as build your ability to perform under pressure within a fixed time duration.

Learn from other people who are experienced in the field of programming. They can be your friends, professors or acquaintances. You can also join groups of like-minded coders and hang out with the coding community to learn from the group members and share your knowledge with others.

Diversifying your skills

Once you have a good command over the language you started with you can start branching to other languages and it will be a good idea to learn a new language that supplements the one you currently know. You can also pick a language that specifically interests you, and since you are already good at logic, new syntaxes won't take a lot of time to master. If you had picked a language which was procedural, it would be a good time to migrate to an object oriented language. But you should keep in mind that the number of languages you know is never a parameter of your coding skills because logic is always the emphasis, not the language.

You can also learn support languages such as markup. These languages are not categorized as programming languages, but are often used in conjunction with them. HTML, XML and CSS are popular examples of support languages. If you wish to go for web development, it's essential to learn HTML and CSS along with PHP; while HTML is used to display data, XML is essentially used to describe data and is extensively used in Android. Both of these do not come under programming languages yet are essential for design and development.

Web development needs multiple languages to function coherently

Besides the above, you can also learn database and Structured Query Language (SQL) because it is an important part of the storage and record keeping process. These are collectively called Database Management Software (DBMS), some of the popular ones being Oracle, MySQL and Microsoft ACCESS. But most of the application of database and SQL comes after you have mastered logic and programming. If you plan to enter into database development and programming, you can have career choices such as

• database administrator
• developer
• or engineer varying with your interests, experience and expertise.

Other miscellaneous tools to help you learn

There are a number of mobile apps that can help you in programming. Most of the online course providers have an app, hence you can learn on

the go. We even have mobile apps that can compile codes while some apps can even make other apps.
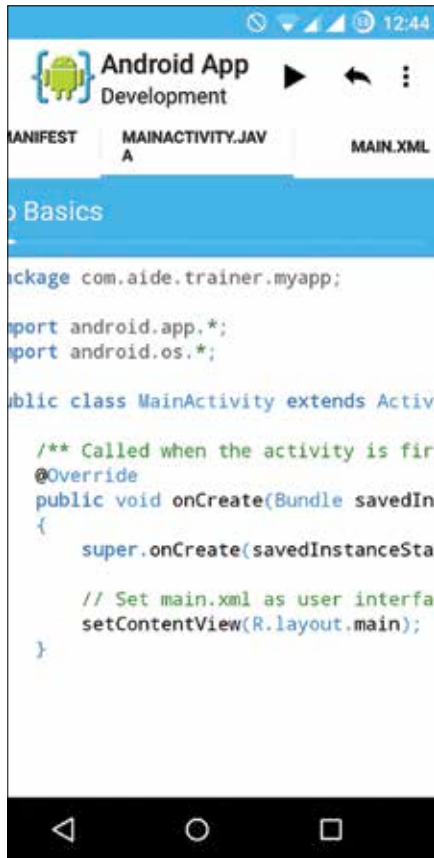
- AIDE is a tutorial supplemented mobile compiler that can compile source code even for an Android application.
- Apps like LightBot teach programming with the help of games.
- You can also find numerous animations, flash games and flash videos which facilitate visual learning of concepts.

Wrapping up

Patience is the key to master any art or science. Most of the top programmers didn't learn to code overnight, they have been coding for years and decades. Often learners abandon the course midway out of frustration or lack of patience, so better take the

AIDE is a very useful app which can help you to code on-the-go.tion coherently.

pain and await the gain. When you have doubts or you are frustrated with a bug or a problem, try *stackoverflow.com* or other such online forums where you will find tons of similar people like you who experienced the same problem and have found the solution, thereby saving you a lot of time and helping you avoid the frustrating parts.

Often novice programmers fail to find their interest or recognise their domain strength, hence end up wasting time in trying out streams that are not suited for them. For e.g.: if design is meant for you, try to focus on design and not development. Programming is such a large

stackoverflow is very helpful to find solutions to bugs and problems or to ask new questions.

domain that it is impossible to try everything and be an expert at all of them. So, the key is to choose fewer focus areas, but be good at them. Happy Coding!

WALKTHROUGH LEARN CARPENTRY

We decided to put the earlier chapters to use and figure out how to go about learning carpentry, this is what we came up with.

Wood has been a part of man's evolution. From crude tools fashioned out of branches to bows and arrows, wood has played a role that's been more pivotal than any metal – after all, what good is a sword without a hilt?

From building houses to adding a touch of class to your home's interiors, a lot can be done with wood. While the task of working with wood may seem like a daunting task, just remember that we've been working with it for thousands of years and there's a part of you that already knows how work with it.

Woodworking is an art. But, unlike most art forms, especially applied art forms, woodworking can be both destructive and additive. You can meticulously scrape away at a piece of wood to make the perfect cylinder. You can also attach it to a flat piece of wood to make a table.

To begin working with wood, it's essential to understand how wood behaves. Wood is a composite of lignin and cellulose fibres. While the lignin gives wood its rigidity, the cellulose fibres give wood its tensile strength.

Types of wood

Wood can be broadly classified into hardwoods and softwoods. While hardwoods are typically denser, softwoods are not as much. Hardwood is harvested from trees that take more time to mature compared to softwood and is typically more expensive as a result.

Indian Hardwoods include Oak, Sal and Rosewood, while softwoods include Pine, Deodar and Red Cedar. Interestingly, Teak, prized for its durability is in fact falls somewhere in between.

Apart from natural woods, there are also composite woods to consider while deciding to embark on a project. Two of the most common composites are plywood and particleboard. Plywood is made by layering wood veneer–thin slices of wood–one on top of another. These layers are then glued together. Particleboard is made by compressing sawdust and wood chips after mixing them with a suitable resin. The compressed wood is extruded out and cut to size.

Between particleboard and plywood, the former is easier to work with, but fails miserably when it comes to strength and isn't water resistant.

There's no better feeling than fingers across polished wood

However, particle board is made of recycled raw materials and is a lot cheaper than plywood or natural wood. Thanks to recent developments in technology, water-resistant marine plywood and particleboard are slowly phasing out the regular-variety counterparts.

Costs

When it comes to any project, the wood you use plays a major role when it comes to budgets. While woods like Teak and Mahogany would cost a bomb and offer great value for money, plywood and particleboard would save you a lot of money if you're aim is to make a bookshelf or a spice rack. The second and more important place where you'll be putting your money down will be in your tools. Tools can be broadly divided into hand tools and power tools.

The differences are simple here. Hand tools are powered by sheer will-power and grit, while power tools are powered by electricity and deep pockets. While power tools will definitely make your job a heck of a lot easier, they tend to break more easily and get phased out very quickly.

Hand tools however are sometimes considered investments. A quality set of hand tools are handed down through generations and last lifetimes if maintained properly. They are also a lot cheaper, but sadly aren't as easily available if your preferred shopping destination ends with '.com'.

These bad boys will last you a lifetime

Tools

The average woodworker will need to invest in a few important tools.

1. Clamps

If you choose to ignore our campaign in favour of hand tools and decide to invest in power tools, we won't judge you. But, if you spend a fortune on the said power tools and blatantly refuse to invest in a set of quality clamps, you're no different from that guy who spends 50 grand on a scooter and 8 lakh on fancy number plate. Clamps are essential while working with wood, because they're the reason your straight cut came out straight and unless you're Zaphod Beeblebrox, your lack of a third hand means you've got no other way to hold the piece of wood you're sawing in place. Your average C-clamp should set you back about ₹300, while an F-clamp is a tad bit more expensive.

2. Saws

Saws come in two varieties and are probably the most important and hardest to truly master. If it weren't for saws, the piece of wood you'd be working with would be the size of, well, a tree and you'd be spending a fortune on ways to bring the wood down to a manageable size (something we'll be discussing in a bit). The first and most commonly used saw is the handsaw. It's what your carpenter used while putting together your action figure display case and can be had for as little as ₹200. The second type of saw is the hacksaw and can be easily identified by its thin blade and tiny teeth. While hacksaws would typically take more time to saw through a piece of wood, their fine teeth give you a cleaner cut, leading to less time sanding. While a smaller hacksaw costs around ₹100, a larger hacksaw could set you back about double that.

3. Files

Remember when we talked about bringing giant pieces of wood down to more manageable sizes without a saw? You'd probably end up using a file. Files, just like the ones the girl at the parlour used when you got that mani-cure done (don't deny it) are used to take away small quantities of wood. They are usually made of metal and feature an abrasive surface. When rubbed against wood, the resulting friction results in wood being taken off in small quantities. Files come in various sizes. Some are big and are typically used in an intermediary step, usually to bring your wood down

First you clamp, then you saw

to roughly the measurement you'd aimed for, others are smaller and are perfect for detailing and for adding a finishing touch. Expect them to set you back between ₹800 and ₹300 for bigger and smaller files respectively.

4. Sandpaper

Once you've got that chair leg down to roughly the correct size, it's time to make things more accurate and give it that finishing touch. Sandpaper is an abrasive sheet of paper. The abrasive side is composed of fine particles called grit. Sandpaper comes in various grades as low as 150 to over a thousand. As the grade climbs higher, the size of the abrasive particles goes down. As this happens, the amount of wood being taken away with each stroke is lesser, but the wood becomes progressively smoother. Sandpaper is easily to find at hardware and paint shops and the prices go up with the grade.

5. Drills

When you think of drills, the first thing that probably comes to mind is most likely green, has a long wire that's probably been extended by some extra electrical wire, comes in a green briefcase and is probably most at home in the hands of a person who answers to the name of Mitra or Raju. Power drills or electric drills are once again a lifetime investment, provided you spend a couple of extra hundreds and spend it on a name brand product.

Pretty impressive huh?

They should ideally set you back about about ₹2,000. But, the kind of drill you really should be looking at is powered by sweat and occasionally also in association with blood and tears–better known as hand drills and should cost about 500 bucks.

6. Drill Bits
Fighting the urge to make jokes about 'the important bits', we move on to drill bits, without which your drill is basically useless. Drill bits are the working end of the drill and a good set could last you a long time. While the cheaper low carbon steel drill bits would set you back a few hundred rupees, titanium-coated drill bits last longer. But, for best results, we'd recommend drill bits made of high carbon steel. Don't worry though, they won't set you back too much.

7. Hammers
Hammers have two parts, the heavy, hitting part and the light, holding part. The heavy, hitting part has two more parts, the flat, hitting part and the fat, round part and the claw-like, forked part. Hammers are primarily meant for hitting, but claw hammers (the ones with the claw-like, forked part at the other end of the flat hitting part) can also be used to remove nails, which makes them more appropriate for beginners. You'll be using hammers to

These guys go hand in hand

join two pieces of wood, typically with a nail and we don't have to tell to not drop it on your foot or smash your thumb with one. A good-quality claw hammer should set you back by about ₹500.

8. Chisels

Moving towards the artistic side of things, a set of chisels will definitely come in handy if you're making something artistic. Chisels are metal wedges that can be used to take away strips of wood. While some can be used in conjunction with a hammer, others can be pushed against the wood's grain to remove strips. Chisels should once again set you back by a few hundred rupees and are the first step towards woodworking, as opposed to carpentry.

9. Tape Measure, Pencils, Rulers, Steel Squares

Measure and tap

The second rule of woodworking is 'measure twice, cut once'. Like science, woodworking requires precision. If you need sufficient motivation to follow this adage, think about that time you sat at a table where one leg was shorter than the others. Remember how a fire inside was stoked every time the table rocked? Channel it and remind yourself that a piece of cardboard under the leg of a table is not a solution.

Safety first

When it comes to working with wood and really sharp things that spin really fast, you HAVE to be safe. More importantly, if you try to not be stupid, you'll get along just fine. While it goes without saying that your fingers should be nowhere near the saw, what a lot of people always forget to do is wear safety goggles. Human beings are dependant more on their sight than any other sense. If a tiny speck of sawdust gets in there, not only are you going to be running around like a headless chicken, you're also running the risk of sending the drill bit into your hand, a hammer into your thumb or a saw across your finger.

It's also important to dress appropriately. There will be a lot of sharp, heavy objects everywhere and a pair of worker's boots would do wonders to keep your toes safe. An apron would also come in handy. The last thing you want to do is scratch yourself with the drill bit plugged into an electric drill.

Finally, on a more serious note, the dangers of a wood workshop are very real and keeping children out is essential. It's also equally important to invest in a solid workbench so that you won't throw your back out while sawing a particularly hard piece of wood and there will always be something to firmly clamp your piece of wood to before sawing or drilling.

The ideal workbench

While picking a workbench, it's important to remember to pick or buy one that's sturdy. A general rule of thumb to be followed while checking to see if the workbench is sturdy enough is to see how many other legs each leg is connected to under the work surface. If each leg is connected to three other legs, you're good to go. The surface of the workbench needs to the the kind that won't warp. Personal experience says, marine/water-resistant particleboard works brilliantly, most resources say that the surface should be made of strips of wood glued and screwed together. A good workbench also has a little recess underneath to leave your tools for the time being and better ones come with drawers.

I saw what I saw

Woodwork is easy if you know how some of the basic tools we just discussed work. It seems more appropriate to get started with the saw because your first step will always be to figure out how big a piece of wood you will need and use a saw to cut a piece out.

Getting down to the saw, the first thing you need to know about saws is that they have teeth and in a majority of them, only one side is sharp, which is usually the side facing you. So, the cutting happens only when you pull the saw towards you.

While sawing, step one is to always start off by drawing a cut line. It's usually with a pencil and involves measuring two times before actually drawing it. Step two is making a starting cut. Some people like to put the saw down against the line and slowly cut through the wood, but the correct way to do it is to put your thumb right next to cut line with the nail facing out and place the saw on the cut line. You're essentially using your nail to help guide your saw to the cut line.

One the starting cut is made, the saw now has a groove to move across. Grip the saw firmly, but not too tight and push the saw against the wood. Angle it slightly downwards and feel the teeth catch the wood. On the second stroke, angle the saw up, so that the teeth slide off with minimum resistance.

Also remember to stick your pointer out. It serves to point your saw along the line.

Sawing is hard, but it's also easy to master, if your grip isn't too tight, it'll be easier to make a straight cut. It's also important to let the saw do the work and to not exert yourself while sawing. If you do manage to go off course, don't try to adjust mid-saw. Stop sawing, pull the saw out and try again from where you veered off.

Chisle me this

Depending on whether you're the type who's always making something or not, you'll either love working with chisels or you'll wish they would go live under a rock. If you're the type who likes to believe they've got two left hands, feel free to skip ahead to the next section.

However, for those who are more dextrous, a set of chisels will give you infinite pleasure and working with a set is so addictive, you'll master wielding one pretty soon. Chisels can be broadly used in two ways. You can either use both hands and gently work with the grain and split the wood or you can hold the chisel with your non-dominant hand and strike the end of it with a hammer or a mallet to chip away at the wood.

Both techniques have very different applications. While the former can be used to shape wood and curve corners, the latter can be used to make grooves and notches.

How you choose to use your chisel will also change the way you hold it. If you're going to

Tap me this way or push me that. Know what I am, you bungling bat?

be splitting the wood, the best way to hold a chisel will be with both hands and parallel to the surface on which you've clamped the piece of wood to. You'd start off by digging in just a little bit before letting the wedge-shaped tip of the chisel to work its magic.

If you're going to chipping away at the wood, you should ideally grasp the handle firmly and orient the chisel in such a way that it's perpendicular to your workbench/table. The hammer or the mallet will be held in the dominant hand and all that's left will be hammer time!

Mr. Sandman

If shaping wood with a chisel isn't your deal, your next best option while working with wood is a file and a several sheets of sandpaper. A file is a flat piece of metal bar with teeth cut into it. As you rub the flat side against the piece of wood, it will take away wood in relatively smaller quantities. If the number of teeth are fewer, the finish will be rough, but you will also take way more wood with each stroke. The ideal approach towards using a file would be to work your way down from the one with the fewest teeth to the one with the most teeth before moving on to sandpaper.

Sandpaper is a sheet of paper with an abrasive material attached to the surface. Sandpaper can be picked up with different grit sizes. As the grit value goes up, the number of particles per square inch goes up. As the

Just look at that finish

number of particles go up, you not only take away less wood, you will also be left with a smoother finish.

Do You Know the Drill?

Having so far spoken about the destructive aspect of woodworking and carpentry, it's time to move on to the additive aspect. Unless you're the kind of person who's into monolithic sculptures, there will eventually come a time when you will find the need to join two pieces of wood.

While an entire FastTrack can be devoted to the detailed art of wood joints, the simplest way you can fasten two pieces of wood together is to use glue in combination with a nail or a screw. Between nails and screws, nails are the stronger of the two, while screws give you a more aesthetic appeal. Screws will also fasten two pieces of wood better, but also tend to be more brittle.

Whether you're using a screw or a nail, if you don't want your wood to split, you should always start with a pilot hole. While in the case of a nail, the pilot hole will only be a little indent on the surface of the wood that serves as a guide, for a screw, the pilot hole should be a little deep and narrower than the screw itself.

The best way to achieve this is to grab a drill with the narrowest drill bit attached to it. Line it up next to the screw and measure how long the screw is and use a piece of tape as a marker for the adequate depth.

Use a hole punch or a nail to make an indent in the wood and line your drill up against the wood. If you're using an electric drill, remember to place one hand under the 'muzzle' if you're drilling parallel to the ground or place your hand on the butt of the drill if you're

Now you know the drill

Never stop learning.

drilling perpendicular to the ground.

Hold down the button to get the drill bit spinning and push into the wood. Keep your hands steady and the drill at a 90 degree angle to the piece of wood. Once you've drilled up to the adequate depth, pull out with the drill bit still spinning. This is so that the bit doesn't snap off.

While on the topic of drilling, it's important to know why drill bits are so uniquely shaped. As the drill bit spins, it digs into the wood. The wood is channelled into the grooves along the drill bit and move out of the way. If you're going to be drilling deep into a thick piece of wood, remember to stop every now and then to clear the grooves of any wood.

While this FastTrack is not a replacement for hours of practice and actual hands-on experience, it does serve as a pretty decent way to test the waters and see if woodworking is really your cup of tea. Like every other skill, woodworking and carpentry are acquired with practice and the more you make, the better you get.

Where can you look for more?

With the power of the internet, it's not difficult to learn how to work with wood. Instructables has hundreds of entries that can help you work your way up towards becoming a master. YouTube has an equal number of videos and other websites like *www.woodworkbasics.com* and *www.finewoodworking.com* along with many others will help you along the way. If you're not satisfied, why not ask a carpenter to let you help him out?

GETTING HIRED

It's all well and good when you finish your online course and get certified. But considering that Indian companies pay little attention to MOOCs compared to a standard degree, what can one do to market MOOC certificates and increase their chances of employment? Let's find out the options, shall we?

Your MOOC certificate IS a Degree

By far the biggest misconception a majority of people have about a MOOC course is that it is not to be taken seriously. That the certificates are mere supplements to your standard academic degree. This couldn't be further from the truth. Academic institutions worldwide have long since recognized the need for an online certificate program that students can access from anywhere in the world, including Ivy League colleges like Harvard and Stanford. Indian institutions are also catching up to the trend – IIT Delhi and Bombay, two of the most popular Indian colleges, are also part of the

certified-MOOC community. Four more Indian colleges would be joining the foray soon. Considering that IIT, the most sought after education board is supporting MOOCs, it shouldn't be hard for potential employers to support them as well. So what kind of steps are taken to ensure that yours is a serious degree? Read on.

Authenticate your certificate

One of the many gripes a company might have with your certificate is whether it's actually yours or not. A friend could have done it for you, you could have even forged certificates (though learning the course would be an easier option), and so on. This is a major hurdle one should overcome. To begin with, select a course with a website that asks you to provide authentication, such as a photo ID or digital signature. edX, a popular MOOC website with tie-ups to Ivy League colleges, uses an authentication system where you get the certificate only after providing your credentials. This is a great way to ensure there is no impersonation or
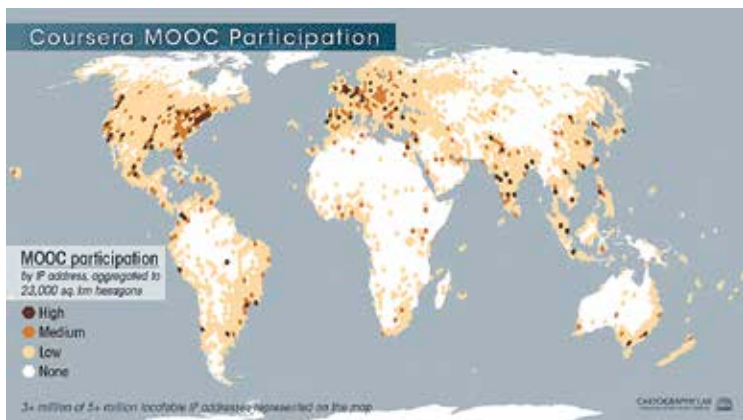
The acceptance of MOOC is growing with each passing day. So don't fret.

dirty business. The process itself has been described by edX as follows: "Using a series of photos of you and your ID, we are able to verify that you are the person completing your work in the course. When you complete and pass the course, your verified certificate provides a level of comfort to others who may want assurance about the authenticity of your edX coursework." Sounds about right, doesn't it?

Coursera.org is another website where you pay a premium amount after which you can provide your credentials. Choose a MOOC whose contents are from established universities and are more popular among other students.

Carry out projects with what you've learned

Completed a course in Java? Awesome. A great way to market yourself would be to start a project based on Java. Then, market the project by using sites

Don't be shy of putting your projects up for scrutiny. You can only learn from feedback.

like Github where others can see your project. While the project itself is a great way to get noticed, people are more likely to notice you if done with an MOOC. Computer-oriented topics need not be the only subject, of course. If your interests are in projects not related to computers (say, writing or electronics projects) make a website or host your project at *www.instructables. com,* a popular platform for any kind of project, like electronics, arts, even cooking and gardening. Basically, any platform where people can view your work and what led you to it is acceptable.

Add a MOOC certificate to your resume

It goes without saying that people would add an extra achievement to their resume, but just as that – an extra, something not very noteworthy. This is something to be avoided. Adding an MOOC certificate to your list of educational qualifications would give the employer the impression that you have done a serious educational course and not merely a supplement. Here is where your credentials will be judged and so it's

of paramount importance that your certificate is authentic and of value; your employers might not take a simple certificate so seriously.

Get listed

Adding your profile on job portals would help to an extent, especially if you're interested in looking for a job outside of India. The good news is that MOOC websites are also offering placement programs where upon completion, students can sign up to be interviewed. Udacity is one example of such a website. When uploading online, make sure you've linked your profile to any projects you've done and your resume. Coursera.com, another popular MOOC website, offers a paid placement program known as the "Signature track" program where students pay up

Don't forget to add that MOOC certificate to your resume. Duh!

to $70 to have their ads sent to employers. If you don't have the money for paid ads, set up a profile on LinkedIn, the world's most popular business social networking website. There are also numerous job portals like Monster.com, Naukri.com but these don't get as much traction as expected,

Get the word out

This is a rather far-fetched concept but one that would benefit in the long run to not only you, but other potential MOOC learners. Spread the word about online education. Let both employees and potential employers be aware of the scene and how it is helping millions of students worldwide. Another point to be noted is that India has the second largest number of users of MOOC services.