Basic Dev Kickstart Resources!!

Doc **madeWithPurpose_ByDSC_IITP( )**
{

      print(" *Happy New Year !!* ")
      print(" *Happy Coding !! (^_^)* ")

      print("-- *from Anam*")

      madeWithPurpose_ByDSC_IITP( );
}
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---//session_start()---------------------------------

"Successful and unsuccessful people do not vary greatly in their abilities. They vary in their desires to reach their potential." – John Maxwell

Wondering what to start and what not??
So here we are, to guide you all to certain basic things that you can start learning by yourself and contribute parallelly to DSC ongoing Projects.

Contents:

3. Python
    a. Basic
    b. Advanced Libraries
        i. Numpy/Scipy
        ii. Matplotlib
        iii. Tkinter
        iv. Turtle
        v. Pygames
4. Machine Learning
    a. Basic Andrew NG
    b. Roadmap by Piyush Tiwari, Joshika, Nischal
5. IoT by IoT Team
6. Game Dev by Shivam Sekhar
7. BlockChain
    a. Ethereum
    b. Hyperledger
8. UI/UX by Sajal Kumar
9. **Bonus!! (New Year Special)**
10. Contact us

Web Development:

First of all, you need to know the basics which include HTML, CSS, JS, Bootstrap.

Check out https://www.w3schools.com/ to learn HTML, CSS, JS, Bootstrap!!

Want video tutorials? Check out the following links:
● **HTML + CSS ->**
https://www.youtube.com/watch?v=TKYsuU86-DQ&list=PL0eyrZgxdwhwNC5ppZo_dYGVjerQY3xYU --(14 hrs)
● **Bootstrap ->**
https://www.youtube.com/watch?v=bPuyoVh9U3g&list=PLr6-GrHUlVf-gjvHuzCnVmeuaeAjRGltv --(2 hrs max)
● **JavaScript (JS) ->**
https://www.youtube.com/watch?v=qoSksQ4s_hg&list=PL4cUxeGkcC9i9Ae2D9Ee1RvylH38dKuET ---(4 hrs)

Hurrah!! If you have done the above things, you have understood the basics. Now let's take a jump towards the backend. Hope you all know what the backend is? So, I will give you some links for preparation:

- **PHP:**
  - https://www.youtube.com/watch?v=pWG7ajC_OVo&list=PL4cUxeGkcC9gksOX3Kd9KPo-O68ncT05o
    - This is a basic course. Do it before you proceed with the next course.
  - https://mega.nz/folder/KTpCgBZC
    Decryption Key: SOhsS3m2EhhDBu1c23XpEg
    - Click on the above link. It will ask for the decryption key. Enter the given key and download the course.

- **NodeJs:**
  https://udemydownload.com/nodejs-the-complete-guide-mvc-rest-apis-graphql-deno/
  - Download the Nodejs course of Udemy from the above link. It has a download button, click on that. You need a torrent application to download the course.
    https://www.youtube.com/watch?v=w-7RQ46RgxU&list=PL4cUxeGkcC9gcy9lrvMJ75z9maRw4byYp
    - You can also check out the above youtube playlist. It will give you a basic understanding of NodeJs, but it's not sufficient :)

- **Django:**
  Python framework for web development.
      - http://bit.ly/dsciitp-django
      - https://www.youtube.com/watch?v=UmljXZIypDc&list=PL-osiE80TeTtoQCKZ03TU5fNfx2UY6U4p
  Any one of the above courses would be ok. But the first one is recommended.

- **Flask:**
  https://www.youtube.com/watch?v=MwZwr5Tvyxo&list=PL-osiE80TeTs4UjLw5MM6OjgkjFeUxCYH
  Again this is Sufficient :)

Want to explore Frontend Frameworks? Check out the following:
- **ReactJs** -> http://bit.ly/dsciitp-reactjs
  - Again, you will need a torrent downloader to download the course. The method is the same as described for NodeJS
- **Angular Js ->**
  https://freecoursesite.com/the-complete-angular-course-beginner-to-advanced-2/
  - Steps remain the same as reactjs

Mobile Development

So in Mobile Development, we have a different kind of domains, you can start with any one of the domains. But it's recommended that as a beginner start with Android Development.

Android Development

1. https://www.udacity.com/course/android-basics-user-interface--ud834

2. https://www.udacity.com/course/android-basics-user-input--ud836

3. https://in.udacity.com/course/android-basics-multiscreen-apps--ud839

4. https://in.udacity.com/course/android-basics-networking--ud843

5. https://www.udacity.com/course/android-basics-data-storage--ud845

6. https://www.youtube.com/playlist?list=PLrnPJCHvNZuCbuD3xpfKzQWOj3AXybSaM

7. https://www.udacity.com/course/firebase-in-a-weekend-by-google-android--ud0352

8. https://www.udacity.com/course/new-android-fundamentals--ud851

9. https://www.youtube.com/watch?v=vPjn-HD7ryc

10. https://www.udacity.com/course/kotlin-for-android-developers--ud888

11. https://www.udacity.com/course/advanced-android-app-development--ud855

12. https://www.udacity.com/course/material-design-for-android-developers--ud862

The following **courses are given in a proper sequence.**
To be done one by one.
 It might take up to 2 months to complete all the courses.
Once completed, you will have a strong grip on Android development.

Codelab is a nice cookbook for different Android technologies. Feel free to check that out. Also, it would be good if you can inculcate a habit of reading Android Blogs in Medium.
They are an awesome source of learning, new Advancements, and libraries in Android.

Special Thanks to Mobile Team Leads (Pruyanka Sachan, Debarrgya Maity) for giving the resource links.

Flutter Development:
Interested to develop cross-platform apps?? Feel free to learn Flutter

https://freecoursesite.com/the-complete-flutter-development-bootcamp-with-dart/
(30 hours)

Download the above course from the link given above.
It's one of the best Flutter Dev courses!

Also, check out the below course after completing the above one:
https://www.youtube.com/watch?v=Dy_zBF6rJFc&list=PLmnT6naTGy2SC82FMSCrvZNogg5T1H7iF (25 hours)

Caution: To generate IOS Apk, you need to have a Mac with Xcode installed!

React Native:
https://freecoursesite.com/the-complete-react-native-and-redux-course-2/

React Native is also used to develop cross-platform apps! It's based on JavaScript and is very similar to ReactJs. So if you know, ReactJs, you will have an advantage in this course.

Caution: To generate IOS Apk, you need to have a Mac with Xcode installed!

To Learn Python:

Python is one of those languages that is used by most of the developers for doing a different kind of tasks, like web dev, scripting, ML, AI, Game Dev, Software Dev, competitive programming, web scraping, data analysis, etc.

Every one of us has to learn Python at some point in time.

Curious to learn it? Let us give you some of the resources. You can go through any of the following resources :)

- https://www.coursera.org/specializations/python
- https://www.w3schools.com/python/default.asp
- https://www.youtube.com/watch?v=HBxCHonP6Ro&list=PL6gx4Cwl9DGAcbMi1sH6oAMk4JHw91mC_

Want to explore more in python? Then you can try out the following libraries of python:

1. **Numpy and Scipy ->**
   https://www.youtube.com/watch?v=NVTWjd_UpzM&list=PLzgPDYo_3xukqLLjNeuCxj4CwvkJin03Z

2. **Matplotllib**
   ->https://www.youtube.com/watch?v=UO98lJQ3QGI&list=PL-osiE80TeTvipOqomVEeZ1HRrcEvtZB_

3. **Tkinter ->**
   https://www.youtube.com/watch?v=yQSEXcf6s2I&list=PLCC34OHNcOtoC6GglhF3ncJ5rLwQrLGnV

4. **Turtle ->**
   https://www.youtube.com/watch?v=kpueya-s888&list=PLzgPDYo_3xumT2sfELR4_YV3aojaxkUC9

5. **PyGames ->**
   https://www.youtube.com/watch?v=K5F-aGDIYaM&list=PL6gx4Cwl9DGAjkwJocj7vlc_mFU-4wXJq

Machine Learning

https://www.coursera.org/learn/machine-learning?
There is no alternative to the above course to start with ML.

Check out the following link for a detailed **roadmap of ML developed By --**
Piyush Tiwari, Joshika, Nischal!
Special thanks to them for the roadmap on ML!!
https://drive.google.com/file/d/1H9Bk8odb82UAZOP6ZDEqQxT5GToit4eY/view?usp=sharing

IoT

The most basic stuff to be done is to get used to Arduino and start interfacing with it.
Once you are steady with it, according to the demands of the situation, switch and
mould yourself. Some basic links are provided below, feel free to reach out to us
because there is more to IoT!

Arduino
https://www.youtube.com/watch?v=fJWR7dBuc18&list=PLGs0VKk2DiYw-L-RibttcvK-WBZm8WLEP

Rpi tutorials-
https://www.youtube.com/playlist?list=PLQVvvaa0QuDesV8WWHLLXW_avmTzHmJLv

Probably the best link that we can provide you
https://www.classcentral.com/report/iot-free-online-courses/

Done with the above links??

Now embrace yourself and unleash your newly honed skills because *if you think the internet has changed your life!! Hold on lad, IoT is here to change it all over again !*

Special Thanks to IoT Team (Akash Das, Archit, Hardik, Arooj) for providing such
wonderful resources in IoT.

Game Dev

- Try problem-solving with programming languages such as C++ and Python because their applications are the most reminiscent in game development
- Try out Py-Games. It's a python library used to build 2D-Games with Animations and sounds. It's a good start for a game developer. Below are a few links for PyGame Tutorials.
  - https://www.youtube.com/watch?v=K5F-aGDIYaM&list=PL6gx4Cwl9DGAjkwJocj7vlc_mFU-4wXJq
  - https://www.youtube.com/watch?v=i6xMBig-pP4&list=PLzMcBGfZo4-lp3jAExUCewBfMx3UZFkh5
  - https://www.youtube.com/watch?v=_JWUPnq2g-8&list=PLu0W_9lII9ailUQcxEPZrWgDoL36BtPYb
  - https://www.youtube.com/watch?v=itB6VsP5UnA
  - https://freecoursesite.com/python-game-development-build-11-total-games/ (Collection of 11 Different Games)
- After you have tried out PyGame it's time to try out some 3d Games. For this, you will be using unity. It's a free gaming engine software.
  - Download the unity hub software from https://store.unity.com/download
  - After installing the above software, try out the following tutorials:
  - https://www.youtube.com/watch?v=pwZpJzpE2lQ
  - https://www.youtube.com/watch?v=j48LtUkZRjU&list=PLPV2KyIb3jR5QFsefuO2RlAgWEz6EvVi6
  - https://www.youtube.com/watch?v=pTLCMZ_qvTw&list=PLGmYIROty-5bpzKQNK3mRMi4pmh_LinV4
  - http://bit.ly/dsciitp-unity3DGame (Udemy Course)

For more details feel free to reach out to the Game Dev Lead!

BlockChain

Ethereum
1. https://www.coursera.org/learn/blockchain-basics
2. https://www.coursera.org/learn/smarter-contracts
3. https://www.coursera.org/learn/decentralized-apps-on-blockchain
4. https://www.coursera.org/learn/blockchain-platforms

Check out https://remix.ethereum.org/ for building a smart contract and deploying it in your browser itself locally.

For solving the assignment questions, you have to install a VirtualBox with the image given in the courses. All instructions for the setup would be covered in the courses. You have to do all 4 courses in the given sequence.

Hyperledger
1. https://www.edx.org/course/introduction-to-hyperledger-blockchain-technologie
2. https://www.edx.org/course/identity-in-hyperledger-aries-indy-and-ursa
3. https://www.edx.org/course/becoming-a-hyperledger-aries-developer
4. https://www.edx.org/course/hyperledger-sawtooth-for-application-developers-2

The best place to learn hyperledger is its official documentation. There are different versions of Hyperledger, check out the versions you are using properly, before checking the documentation.
Documentation link:
https://hyperledger-fabric.readthedocs.io/en/release-2.2/whatis.html

UI/UX

Overview of UI/UX Design
Video I: [Click here](#)
Video II: [Click here](#)

Breakdown of UI/UX design in a full-fledged project:

1) Identifying the problem and finding a solution by a design-driven solution
   A nice little explanation about design thinking and solutions: [Video link](#)
2) User research (complex topics)
3) Usability Tests (Complex topics)

Topics you can start working on :) are below

4) Layouts for the design
   ● Basics of design like color theory, design systems, typography, illustrations etc.
     A pretty good source for learning these: Youtube, Google, Pinterest, Behance, dribble, Instagram, and looking at a lot of apps and websites online.

     Some resources: [color theory](#), [Typography](#)
     some good websites [CRED](#), [NETFLIX](#)
     Some apps like the CRED app, Swiggy user app, and Q Me app UI is also a good one to start the basics

   ● Getting friendly with the software being used in the industry
     Adobe Photoshop, Adobe illustrator (specific to illustrations and graphic design)
     Download link: [Getintopc.com](#)

     UI/UX standard tool
     Adobe XD (app download link [Getintopc.com](#))
     Or you can make an ID in adobe cloud.
     Make your ID here: [Creative cloud](#)
     learn how to use the creative cloud: [cloud basics](#)

     Adobe XD Basics: source YT, IG, and Behance, Daniel Scott on YT is a very good source
     to learn the basics: [link](#)

- Once you get a hang of the software, peeps can get some courses from Coursera and Udemy. Here are some of my favorites below
  1) [Adobe xd designing and prototyping](#)
  2) [Digital product design](#)
  3) [Case Study UX masterclass](#)

- Other than these read a lot of blogs and case studies..on Behance and LinkedIn
  Other great content and pages you can follow:
  1)[(11) Saptarshi Prakash | LinkedIn](#)

  2)[RethinkingUX: Overview | LinkedIn](#)

  3)[UX Collective (uxdesign.cc): Overview | LinkedIn](#)

  4)[Saptarshi Prakash UX (@saptarshiux) • Instagram photos and videos](#)

  5)[Designspective (@designspective) • Instagram photos and videos](#)

  6)[W.Hussain 🦉 Marketing Strategist (@whussain.official) • Instagram photos and videos](#)

Some of my favorite blogs
[Blog #1](#)
[Blog #2](#)

Happy learning folks ;)

Special Thanks to Sajal Kumar for creating such a nice Roadmap for every one of us in the field of UI/UX.

Bonus Section

Augmented Reality:

https://onlinecoursebay.com/build-12-augmented-reality-ar-apps-with-unity-vuforia-udemy-free-download/

Google out to know what Augmented Reality is!!

https://www.youtube.com/watch?v=oH_LfXnklRw

(ˆ ˑ ˑ ˆ ˑ) See the above video to know more…. (ˆ ˑ ˑ ˆ ˑ)

Self Management:

"There are two types of education: education for a living and education for life. When we study in college, striving to become a doctor, a lawyer, or an engineer, that is education for a living. But education for life requires an understanding of the essential principles of spirituality; it is about gaining a deeper understanding of the world, our minds, our emotions, and ourselves." - Amma

The following quotes are a lesson that I learned from my School and which has helped me to frame who am I today.

You all might be wondering why this topic suddenly? Remember one thing **"Time is limited"**. *"Your energy is limited"*. You have to use it properly to overcome problems. You have to manage time properly to learn new technologies along with your academics. You have to use your energy very wisely and efficiently to lead a successful life.

Check out the following videos. You will need the lessons from all of these videos to handle your life properly:

1. https://youtu.be/CXkWNIepdU0
2. https://youtu.be/AwRfvtCpdiQ
3. https://youtu.be/AH7k3P6W7V8?list=TLPQMjYxMjIwMjBlhSE8wea_bw
4. https://youtu.be/SpYg2qCVv3o?list=PLQxZUf8GSluNHB02ALGYqOP2P9BFcjJ5B
5. https://youtu.be/XlhoQKbXut8?list=PLvRaKZWTl0mRCh_hOVWDsD5ERqQAy74I0
6. https://youtu.be/udZtsIz3d_U
7. https://youtu.be/boRV7otSwfI?list=TLPQMjYxMjIwMjBlhSE8wea_bw

8. https://youtu.be/QsumYK9o0Ew?list=TLPQMjYxMjIwMjBlhSE8wea_bw
9. https://www.youtube.com/watch?v=HPrhvo6OlBI
10. https://youtu.be/RwxC5J8LI4Q?list=TLPQMjYxMjIwMjBlhSE8wea_bw
11. https://www.youtube.com/watch?v=QGcOzD8pX14
12. https://youtu.be/boRV7otSwfI?list=TLPQMjYxMjIwMjBlhSE8wea_bw
13. https://youtu.be/LfdJS_8M8bY?list=TLPQMjYxMjIwMjBlhSE8wea_bw
14. https://www.youtube.com/watch?v=QEkHcPt-Vpw
15. https://youtu.be/v7fODknoBrM?list=TLPQMjYxMjIwMjB83S4XAY6YVQ
16. https://youtu.be/hn0Uk4YQv0Q?list=TLPQMjYxMjIwMjB83S4XAY6YVQ
17. https://youtu.be/HeAcRFIrKFY?list=TLPQMjkxMjIwMjBURTD6pCoIlA
18. https://www.youtube.com/watch?v=J3dxSURUw2o
19. https://youtu.be/taH8DlCTBWE?list=TLPQMzAxMjIwMjCkW0beVq4dww
20. https://youtu.be/AZ5aP82_agc
21. https://youtu.be/w5f2WZYClpI?list=TLPQMzAxMjIwMjD-cf0cMcdzRg

Recommended Books to Read:
- Think and Grow Rich by Napoleon Hill
- The Magic of Thinking Big by David J. Schwartz
- The Power of Positive Thinking by Norman Vincent Peale

You can read the above books. It won't be a waste of time. Pdf's of all the above books are present online.

The above few videos and books are very very important for all of us.
Don't just watch the video or read the book, and keep the lessons aside.

Learn the lessons and apply them in your life.

You will be able to achieve a lot, beyond your imagination, and lead a happy life.

Stay focussed on your work! Throw away negativities! Gain positivity.

Remember a few things:

- "People you are with define who you are".
  So Choose the right people.
- Take the right decisions in life.
- FOCUS
- Value yourself.

- Lead a happy life.

Love the work you do!
"Concentration and love are one - like two sides of a coin. Love should be there if you want concentration." - *Amma*

--To be continued

Contact Us:

For any technical doubts put up your queries in our discord server:
https://discord.gg/2MkAcvcRca

If you are facing any issue on self-management, mental health feel free to reach us at the following email id:
anam204@gmail.com
Your identity would be kept anonymous and won't be shared with anyone else. This is a new start from Anam to help you all.

The doc is currently maintained by Anam under DSC IIT Patna.