**VISION FORGE**

1.1 **Intro to Verilog & FPGA**

**What is Verilog?** - [Verilog Tutorial - javatpoint](https://www.javatpoint.com/verilog#:~:text=Verilog%20is%20a%20Hardware%20Description,using%20HDL%20at%20any%20level.)

<https://www.chipverify.com/tutorials/verilog> (learn about basic operations in verilog - data types, operators, assign statements, initial block and always block,etc.)

**Installation** - <https://bleyer.org/icarus/>

**Practise here** - [Problem sets - HDLBits](https://hdlbits.01xz.net/wiki/Problem_sets)

**What is FPGA?** Checkout [https://www.youtube.com/watch?v=WY-F3 koknih7c](https://www.youtube.com/watch?v=WY-F3knih7c)

Also <https://www.youtube.com/watch?v=CfmlsDW3Z4c>

1.2 **Python Basics & I.P**

**Get Affluent with python**

<https://www.tutorialspoint.com/python3/> (read full of the basic tutorial, this or any similar python tutorial online)

[https://www.geeksforgeeks.org/libraries-in-python/#:~:text=A%20Python%20library%20is%2 0a,and%20again%20for%20different%20programs.](https://www.geeksforgeeks.org/libraries-in-python/#:~:text=A%20Python%20library%20is%2)

Checkout this playlist - <https://www.youtube.com/watch?v=rfscVS0vtbw>

Notes:

1. For now focus on understanding **basic syntax, data structures, and libraries (mainly numpy, panda, matplotlib)** thoroughly.

**Image Processing basics:**

<https://www.simplilearn.com/image-processing-article>

Checkout this playlist (1.5x):

<https://youtube.com/playlist?list=PLzqxy-a_In-867YdxS-1kmXzIMI0Lb2M2&si=sBI7JzMJoEgAM3eR>

**Week 1 Material**

Python Basics Colab link - [Python\_libraries.ipynb](https://colab.research.google.com/drive/1eYhQtigt-17TT-mJoiHhz50WAfDRbYD7?usp=sharing)

Image Processing Colab link -

Installing and setting up Iverilog on VSCode - [Verilog HDL - Installing and Testing Icarus Verilog + GTKWave](https://www.youtube.com/watch?v=3Xm6fgKAO94)