PYTHON	TITLE	RESOURCES	PYTHON SETUP	https://youtu.be/W-Bi6AjEQfM	
1	Basic data types + operators	https://youtu.be/PTTd1jKx8_o?si=tA21SbK_jTjmfDGU			
2	Loops & if-else	https://youtu.be/zv3MVNy3l4E?si=nKs52v1BNBrte_0S			
3	Data Structures	List - https://youtu.be/N55AxhC6REU?si=CECji4YcidL9-jKF Set, tuple, dictionary -	PYTHON INTERVIEW QUESTIONS	https://www.hackerrank.com/blog/python-interview-questions-developers-should-know/	
4	Functions	https://youtu.be/kY3DdsBs6Wk?si=C7bnaZQgUe1nWsYG		https://www.hackerrank.com/domains/python/py-introduction/difficulty/all/page/1	
5	File Handling	https://youtu.be/-XQdyy8chuo?si=Xyx8q7Zp-HNkuv5k		https://www.hackerearth.com/practice/problems/?limit=20&offset=0	
6	Numpy	https://youtu.be/y1cpttvUbtY?si=TBpY9oTGN3wlzdBP			
7	Pandas	https://youtu.be/3hTOHzo4Jf8?si=xJ0yeiWcmvERS-s0			
8	Data Visualization	Matplotlib - https://youtu.be/jv_2CXx630M?si=ZHmdwJaW6VKuQP_t Seaborn - https:			
9	OOPS	https://youtu.be/R9Yia3aUooI?si=guDjGPbIX5ls_XDC			
10	Multi-threading/ Multi-processing	https://youtu.be/rDro-he___Q?si=OWQ8RjG7cKdR-dGt			
SQL	TITLE	RESOURCES			
1	Relational databases.	https://youtu.be/OqjJjpjDRLc?si=oaHNgYPcpc8Ol7v2			
2	Basic Queries(SELECT, WHERE LIKE, DISTINCT, BETWEEN, GROUP BY, ORDER BY)	SQL Tutorial			
3	Advanced queries(CTE, Subqueries, Window Functions)	https://www.w3schools.blog/sql-cte-how-to-master-it-with-easy-examples	https://www.w3resource.com/sql/subqueries/understanding-sql-subqueries.php#google_vignette	https://www.datacamp.com/cheat-sheet/sql-window-functions-cheat-sheet	
4	Joins	SQL Tutorial			
5	MYsql playlist	https://www.youtube.com/playlist?list=PLZoTAELRMXVNMRWIVf0bDDSxNEn38u9Cl			
	SQL INTERVIEW QUESTIONS	https://www.datacamp.com/blog/top-sql-interview-questions-and-answers-for-beginners-and-intermediate-practitioners			
Statistics	TITLE	RESOURCES			
1	Mean, Median, Mode	https://youtu.be/YAOoKUT74TI?si=XduHNQ2gx4y-1SgR			
2	Percentiles & Quartiles	https://youtu.be/SZ07hyMEOAU?si=czwNHDuw8TuSwYEn			
3	Range, Variance & Standard deviation	https://youtu.be/ovq5InIpF2U?si=I5Y584KUvgv1-tjM			
4	Normalization & Standardisation	https://youtu.be/POrcNP2Zhc8?si=L37k0JmyMa8nJGPb		QUIZES	
5	Covariance	https://youtu.be/qtaqvPAeEJY?si=fkuLI8pSdPddFgHE		Statistics and Probability	Khan Academy	
6	Correlation	https://youtu.be/xZ_z8KWkhXE?si=JE-SclbDz8h_ksdd		https://www.geeksforgeeks.org/quizzes/statistics-quiz-trivia-mcq-questions-solution/	
7	Hypothesis testing	https://youtu.be/fb8BSFr0isg?si=mhw0Q2PdDDx_f1dh			
8	P value & hypothesis testing	https://youtu.be/xdZSWsKk5P0?si=xHfAzJtdM2HaKAnt			
9	z test	https://youtu.be/kNKyhEuqszs?si=mYc8X1EZvilAtHJD			
10	chi square test	https://youtu.be/jABsbNBPXlk?si=T-T4G7bNG_2s4BDR			
11	ANNOVA	https://youtu.be/0NwA9xxxtHw?si=2pXSo-59Gqe-rhbu			
Probability	TITLE	RESOURCES			
1	Additive & Multiplicative Rule	https://youtu.be/t9fhxJCAZ6Q?si=Zc7M_Q7BXkzE8x-v			
2	PDF, PMF, CDF	https://youtu.be/YXLVjCKVP7U?si=ehcSK7ANTX6_GjeD			QUIZES
3	Normal Distribution	https://youtu.be/RKdB1d5-OE0?si=iNCFTMrrCNmd5gqB			https://www.khanacademy.org/math/statistics-probability
4	T-Distribution	https://youtu.be/UetYS3PaHIo?si=HtQ_dX4hqNOISZ9f			https://www.geeksforgeeks.org/quizzes/probability-gq/
5	Binomial Distribution	https://youtu.be/e04_wUoscBU?si=p7b8fhXgJDsC1bZ2			
6	Bernoulli Distribution	https://youtu.be/z2o1F7Un54I?si=WPwEdOOGDIWiuaba			
7	Uniform Distribution	https://youtu.be/vxdGlb83e_c?si=BCZ4Kww-NAWEeTgo			
8	Poisson Distribution	https://youtu.be/cPOChr_kuQs?si=OSyuJZtEjYe4NCJh			
9	Central Limit theorem	https://youtu.be/Ux9bQJ1NZFc?si=TMXQjQ_gVfLCXuu-			
Maths	TITLE	RESOURCES			
1	Scalar & vectors	https://youtu.be/rcDXQ-5H8mk?si=QqYFNT-fbBxXTZ0V			
2	Matrix	https://youtu.be/ZFVFtVbeerI?si=jEwxyofDfcM0HuZl			
3	Linear transformations	https://youtu.be/kYB8IZa5AuE?si=DIUWkZALuuHwrFdn			
4	Eigen vectors & Eigen values	https://youtu.be/PFDu9oVAE-g?si=IVA082orb0mltCZ4			
5	Equation of line & plane	https://youtu.be/-9KypceT5uY?si=AMfl0NwnxBA_enJ7			
6	Slopes & derivatives	https://youtu.be/GJODOGq7cAY?si=zo9kUJMd0FV9Ywy3			
7	Chain rule of derivatives	https://youtu.be/xYC0sDCsI9Q?si=kkkDuqEEhY9lHs3x			

	Feature Engineering	https://youtu.be/5dOdRCTYyo0?si=D8EgrhHtvTgjJbJg			
	Feature Selection	https://youtu.be/EqLBAmtKMnQ?si=k2I2yU14MixkTq0b			
	SAMPLE NOTEBOOKS TO TRY	https://www.kaggle.com/code/jesucristo/1-house-prices-solution-top-1			
		https://www.kaggle.com/code/ash316/eda-to-prediction-dietanic			
		https://www.kaggle.com/code/gunesevitan/nlp-with-disaster-tweets-eda-cleaning-and-bert			
	Types of ML	https://youtu.be/1caj2V7E31w?si=cxi2Ly6QHPZFRHT4			

Machine Learning	**TITLE**	**RESOURCES**	**CROSS VALIDATION**	https://youtu.be/p_Lu-nJsb70?si=uRLT7Dd4dBFLDys-	
1	Linear regression	https://youtu.be/8jazNUpO3IQ?si=xUgrEJDKBGFDm8nx			
2	Logistic regression	https://youtu.be/zM4VZR0px8E?si=ed_on1Eq-KiwEI0F	**CLASSIFICATION METRICS**	https://youtu.be/aWAnNHXIKww?si=bmJut1n1jltGmjYe	
3	Support Vector Machine	https://youtu.be/efR1C6CvhmE?si=jAv2IEuYZBmfkHvC	**REGRESSION METRICS**	https://medium.com/ai-mind-labs/regression-evaluation-metrics-382aa97c3ee5	
4	Naive Bayes Theorem	https://youtu.be/O2L2Uv9pdDA?si=AWXFE-Dh24T6riGs			
5	K Nearest Neighbours	https://youtu.be/CQveSaMyEwM?si=RVHyaXfoMu5VR_xO	**OVERFIT VS UNDERFIT**	https://youtu.be/BqzgUnrNhFM?si=sSJQhxk8iC2QG9DE	
6	Decision Trees	https://youtu.be/_L39rN6gz7Y?si=8UtutcxuPyjStNLW			
7	Random Forest	https://youtu.be/J4Wdy0Wc_xQ?si=W7IClvAUt-u8oRow	**HYPERPARAMETER OPTIMISATION**	https://youtu.be/xRhPwQdNMss?si=BuXNj18OhMK6alY9	https://www.youtube.com/live/355u2bDqB7c?si=nQLwK08I2eeQ-av7
8	Adaboost	https://youtu.be/LsK-xG1cLYA?si=IcH6IOxIyDXJ9yC9			
9	Gradient Boosting	https://youtu.be/3CC4N4z3GJc?si=A6yKq8m4HDBD612V			
10	Xgboost	https://youtu.be/33fGfuleXw0?si=JI_w6egaUvdpDIQ6			
11	PCA	https://youtu.be/FgakZw6K1QQ?si=OsFhcgwKkrPnz88k			
12	Kmeans clustering	https://youtu.be/EltIUEPCIzM?si=VeQqsjDBMsjZnzpV			
13	Hierarchical clustering	https://youtu.be/7xHsRkOdVwo?si=4LpQ2NrPtCjB7sjA			
14	DBSCAN	https://youtu.be/RDZUdRSDOok?si=SJSvRF-aT6AQkH1o			
15	NLP techniques	https://www.youtube.com/playlist?list=PLeo1K3hjS3uuvuAXhYjV2lMEShg2UYSwX			

Deep Learning	**TITLE**	**RESOURCES**		**Deep Learning specialization**	**Andrew Ng**	**https://github.com/amanchadha/coursera-**
1	Artificial Neural Network	https://www.youtube.com/playlist?list=PLM8lYG2MzHmQn55ii0duXdO9QSoDF5myF				
2	Recurrent Neural Network	https://youtu.be/M6-AIQnB4_Q?si=nQYKEOiMPy2koSro	https://youtu.be/2XuWCHEk-a8?si=L6Fb5q4BbpmEg5ub			
3	Convolutional Neural Network	https://youtu.be/2XuWCHEk-a8?si=L6Fb5q4BbpmEg5ub	https://youtu.be/UU8W__slIOU?si=f2RAvP5Ewxn6eZoI			
4	LSTM & GRU RNN	https://youtu.be/E4c_bom0_6Y?si=5o1dsA5cFQ719wCA	https://youtu.be/jTjLf0ytSw8?si=5Jw5qPEc_mhgklzt			
5	Bidirectional RNN	https://youtu.be/atYPhweJ7ao?si=3dL83BqDjo2JTL1v				
6	Encoder Decoder	https://youtu.be/L8HKweZIOmg?si=YQQU5WoypeY9djRR				
7	Attention mechanism	https://youtu.be/PSs6nxngL6k?si=D2ixNmR-SsGifuY6				
8	Transformers	https://youtu.be/csWluHwfsB8?si=vJ-1VNI857y4SuVE				

MLOPS	**TITLE**	**RESOURCES**			
VERSION CONTROL	Github	https://youtu.be/tRZGeaHPoaw?si=8wqd1SX25ki2tFyc			
CI/CD	Github actions	https://youtu.be/p7V4Aa7qEpw?si=TKBKFT3WP00Y83mX			
	ML flow	https://youtu.be/6ngxBkx05Fs?si=npQeFdlFxX59RjQY			
	BentoML	https://youtu.be/i_FtfdOKa2M?si=nDUwUEJHO-tovXiN			
	DagsHub	https://www.youtube.com/playlist?list=PLC4-OBA5bH3iZKN3IzLAzLZzvPnPt8Ajt			
VIRTUALIZATION	Docker	https://www.youtube.com/watch?v=wRQUKNddzx4&list=PL5eh956CtlER4nKazA5U9J			
CONTAINER MANAGEMENT	Kubernetes	https://www.youtube.com/watch?v=A9rcaFKXD3s&list=PL5eh956CtlETZMJEMR866PCS2YNq_3O6d			
	Flask	https://www.youtube.com/playlist?list=PLZoTAELRMXVPBaLN3e-uoVRR9hlRFRfUc			
API FRAMEWORK	Streamlit	https://youtu.be/D0D4Pa22iG0?si=g08Mdj0yJ7ZJnim4			
	FastAPI	https://youtu.be/Wr1JihTt1Xg?si=2O4Q5wuOAzFhHLTk			
	Django	https://www.youtube.com/playlist?list=PLsyeobzWxl7r2ukVgTqIQcl-1T0C2mzau			
CLOUD	AWS	https://www.youtube.com/live/kQ9qiIzsFxM?si=CkD_r9Foe0FZlWqQ			
	GCP	https://www.datacamp.com/blog/google-cloud-for-data-scientists			

GEN AI	**RESOURCES**				
LLM Intro	LLM Explained | What is LLM	https://aws.amazon.com/what-is-large-language-model/			
LLM Basics	https://fullstackdeeplearning.com/llm-bootcamp/spring-2023/llm-foundations/				
Prompt Engineering	https://www.deeplearning.ai/short-courses/chatgpt-prompt-engineering-for-developers/				
what is RAG?	https://learn.deeplearning.ai/courses/building-applications-vector-databases/lesson/3/retrieval-augmented-generation-(rag)				
LLM finetuning	https://learn.deeplearning.ai/courses/finetuning-large-language-models/lesson/1/introduction				
Advanced LLM Finetuning	https://www.youtube.com/watch?v=eC6Hd1hFvos				
Landchain for LLM app developement	https://learn.deeplearning.ai/courses/langchain/lesson/1/introduction	https://youtu.be/swCPic00c30?si=vaWRut8rWHHeZd-F			
OPENAI	https://www.youtube.com/watch?v=CbpsDMwFG2g&list=PLZoTAELRMXVMTWGW9iS45ZTcMsntos6VO				
Live Generative AI Playlist	https://www.youtube.com/watch?v=ajWhePBZD70&list=PLmQAMKHKeLZ-iTT-E2kK9uePrJ1Xua9VL				

No	**BOOK**	**LINK**			
1	Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow	https://www.amazon.in/Hands-Machine-Learning-Scikit-Learn-TensorFlow/dp/9355421982			
2	Practical Statistics for Data Scientists	https://www.amazon.com/_/dp/1491952962?smid=ATVPDKIKX0DER&_encoding=UTF8&tag=oreilly20-20			
3	Ace the Data Science Interview	https://www.amazon.in/Ace-Data-Science-Interview-Questions/dp/0578973839			