|  |  |  |
| --- | --- | --- |
| Sr. No. | Topic | Resources |
|  | Clustering Algorithms: K-Means | [Link](https://www.google.com/search?q=Clustering+Algorithms%3A+K-Means&sca_esv=39c32060fd80a949&rlz=1C1VDKB_enIN991IN991&sxsrf=AHTn8zrLrGno1o3L2iIwAir5A4tzOSAxZQ%3A1747536441509&ei=OUopaIr4HqWZnesPx8T34A0&ved=0ahUKEwjK-M_GgKyNAxWlTGcHHUfiHdwQ4dUDCBA&uact=5&oq=Clustering+Algorithms%3A+K-Means&gs_lp=Egxnd3Mtd2l6LXNlcnAiHkNsdXN0ZXJpbmcgQWxnb3JpdGhtczogSy1NZWFuczIEECMYJzIGEAAYFhgeMgYQABgWGB4yBhAAGBYYHjIGEAAYFhgeMgYQABgWGB4yBhAAGBYYHjIGEAAYFhgeMgsQABiABBiGAxiKBTILEAAYgAQYhgMYigVI6BtQ5AdY8hNwAXgBkAEBmAHPCaABpCCqAQU2LTEuM7gBA8gBAPgBAZgCAqAC5QbCAgcQIxiwAxgnwgIKEAAYsAMY1gQYR5gDAIgGAZAGCZIHBTEuNi0xoAfOJLIHAzYtMbgH2wY&sclient=gws-wiz-serp) |
|  | Hierarchical Clustering | [Link](https://www.google.com/search?q=hierarchical+clustering+algorithms&rlz=1C1VDKB_enIN991IN991&oq=Hierarchical+Clustering+&gs_lcrp=EgZjaHJvbWUqDAgBEAAYQxiABBiKBTIGCAAQRRg5MgwIARAAGEMYgAQYigUyDQgCEAAYkQIYgAQYigUyDQgDEAAYkQIYgAQYigUyDQgEEAAYkQIYgAQYigUyDAgFEAAYQxiABBiKBTIMCAYQABhDGIAEGIoFMgwIBxAAGBQYhwIYgAQyDAgIEAAYQxiABBiKBTIMCAkQABhDGIAEGIoF0gEIMjY4N2owajmoAgCwAgA&sourceid=chrome&ie=UTF-8) |
|  | Time-series analysis | [Link](https://www.google.com/search?q=Time-series+analysis&rlz=1C1VDKB_enIN991IN991&oq=Time-series+analysis+&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQABiABDIHCAIQABiABDIICAMQABgWGB4yCAgEEAAYFhgeMggIBRAAGBYYHjIICAYQABgWGB4yCAgHEAAYFhgeMggICBAAGBYYHjIICAkQABgWGB7SAQgyNDcwajBqOagCALACAA&sourceid=chrome&ie=UTF-8) |
|  | Introduction to Text Analysis: Text-preprocessing, Bag of words, TF-IDF and topics | [Link](https://www.google.com/search?q=Introduction+to+Text+Analysis%3A+Text-preprocessing%2C+Bag+of+words%2C+TF-IDF+and+topics&rlz=1C1VDKB_enIN991IN991&oq=Introduction+to+Text+Analysis%3A+Text-preprocessing%2C+Bag+of+words%2C+TF-IDF+and+topics&gs_lcrp=EgZjaHJvbWUyBggAEEUYOdIBBzgzMWowajmoAgCwAgA&sourceid=chrome&ie=UTF-8) |
|  | Need and Introduction to social network analysis | [Link](https://www.google.com/search?q=Need+and+Introduction+to+social+network+analysis&rlz=1C1VDKB_enIN991IN991&oq=Need+and+Introduction+to+social+network+analysis+&gs_lcrp=EgZjaHJvbWUyCQgAEEUYORjvBTIICAEQABgWGB4yCAgCEAAYFhgeMggIAxAAGBYYHjIICAQQABgWGB4yCAgFEAAYFhgeMg0IBhAAGIYDGIAEGIoFMg0IBxAAGIYDGIAEGIoFMg0ICBAAGIYDGIAEGIoFMgoICRAAGIAEGKIE0gEIMTk4MmowajmoAgCwAgA&sourceid=chrome&ie=UTF-8) |
|  | Introduction to business analysis | [Link](https://www.google.com/search?q=introduction+to+business+analysis&rlz=1C1VDKB_enIN991IN991&oq=Introduction+to+business+analysis&gs_lcrp=EgZjaHJvbWUqBwgAEAAYgAQyBwgAEAAYgAQyBwgBEAAYgAQyBwgCEAAYgAQyBwgDEAAYgAQyCAgEEAAYFhgeMggIBRAAGBYYHjIICAYQABgWGB4yCAgHEAAYFhgeMggICBAAGBYYHjIICAkQABgWGB7SAQgxOTY2ajBqOagCALACAA&sourceid=chrome&ie=UTF-8) |
|  | Model Evaluation and Selection: Metrics for Evaluating Classifier Performance | [Link](https://www.google.com/search?q=Model+Evaluation+and+Selection%3A+Metrics+for+Evaluating+Classifier+Performance&rlz=1C1VDKB_enIN991IN991&oq=Model+Evaluation+and+Selection%3A+Metrics+for+Evaluating+Classifier+Performance&gs_lcrp=EgZjaHJvbWUyBggAEEUYOdIBBzcxMWowajmoAgCwAgA&sourceid=chrome&ie=UTF-8) |
|  | Holdout Method and Random Sub sampling | [Link](https://www.google.com/search?q=Holdout+Method+and+Random+Sub+sampling&rlz=1C1VDKB_enIN991IN991&oq=Holdout+Method+and+Random+Sub+sampling+&gs_lcrp=EgZjaHJvbWUyBggAEEUYOdIBCDE3MTlqMGo5qAIAsAIA&sourceid=chrome&ie=UTF-8) |
|  | Parameter Tuning and Optimization | [Link](https://www.google.com/search?q=parameter+tuning+and+optimization&rlz=1C1VDKB_enIN991IN991&oq=Parameter+Tuning+and+Optimization&gs_lcrp=EgZjaHJvbWUqBwgAEAAYgAQyBwgAEAAYgAQyDQgBEAAYhgMYgAQYigUyDQgCEAAYhgMYgAQYigUyDQgDEAAYhgMYgAQYigUyBwgEEAAY7wUyCggFEAAYgAQYogQyCggGEAAYgAQYogTSAQgxNTAzajBqOagCALACAA&sourceid=chrome&ie=UTF-8) |
|  | Result Interpretation | [Link](https://www.google.com/search?q=result+interpretation+in+data+science&sca_esv=42bda1b6e743cdb7&rlz=1C1VDKB_enIN991IN991&sxsrf=AHTn8zoZ7EVeweVgj1Cu1WMnk7EYcgw6jQ%3A1747536819965&ei=s0spaLnaOoGsseMPv8epuQ8&oq=result+interpretation+in+data+&gs_lp=Egxnd3Mtd2l6LXNlcnAiHnJlc3VsdCBpbnRlcnByZXRhdGlvbiBpbiBkYXRhICoCCAEyBRAhGKABMgUQIRigATIFECEYoAEyBRAhGKABMgUQIRigATIFECEYnwUyBRAhGJ8FSNEyUL4EWLMlcAF4AZABAJgB8QOgAdYYqgEHMi00LjIuM7gBA8gBAPgBAZgCCqACtBnCAgoQABiwAxjWBBhHwgIKEAAYgAQYQxiKBcICCxAAGIAEGJECGIoFwgIFEAAYgATCAgYQABgWGB7CAggQABgWGAoYHsICCxAAGIAEGIYDGIoFwgIIEAAYgAQYogTCAgUQABjvBcICBxAhGKABGAqYAwCIBgGQBgiSBwkxLjAuNC4xLjSgB8Y9sgcHMi00LjEuNLgHqxk&sclient=gws-wiz-serp) |
|  | Clustering and Time-series analysis using Scikit- learn | [Link](https://www.google.com/search?q=Clustering+and+Time-series+analysis+using+Scikit-+learn&rlz=1C1VDKB_enIN991IN991&oq=Clustering+and+Time-series+analysis+using+Scikit-+learn+&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRigATIHCAIQIRigATIHCAMQIRigATIHCAQQIRigATIHCAUQIRigATIHCAYQIRiPAjIHCAcQIRiPAtIBCDIwNzBqMGo5qAIAsAIA&sourceid=chrome&ie=UTF-8) |
|  | Sklearn | [Link](https://www.google.com/search?q=sklearn+in+data+science&rlz=1C1VDKB_enIN991IN991&oq=sklearn+in+da&gs_lcrp=EgZjaHJvbWUqCAgBEAAYFhgeMgYIABBFGDkyCAgBEAAYFhgeMggIAhAAGBYYHjIICAMQABgWGB4yCAgEEAAYFhgeMggIBRAAGBYYHjIICAYQABgWGB4yCAgHEAAYFhgeMggICBAAGBYYHjIICAkQABgWGB7SAQg4MzAyajBqOagCALACAA&sourceid=chrome&ie=UTF-8) |
|  | Metrics | [Link](https://www.google.com/search?q=metrics+in+data+science&rlz=1C1VDKB_enIN991IN991&oq=metrics+&gs_lcrp=EgZjaHJvbWUqDQgEEAAYkQIYgAQYigUyBwgAEAAYjwIyDAgBEAAYQxiABBiKBTINCAIQABiRAhiABBiKBTIPCAMQABhDGLEDGIAEGIoFMg0IBBAAGJECGIAEGIoFMgcIBRAAGIAEMgwIBhAAGEMYgAQYigUyDAgHEAAYQxiABBiKBTIMCAgQABhDGIAEGIoFMgcICRAAGIAE0gEIMzQ3MWowajmoAgCwAgA&sourceid=chrome&ie=UTF-8) |
|  | Confusion matrix | [Link](https://www.google.com/search?q=confusion+matrix+in+data+science&rlz=1C1VDKB_enIN991IN991&oq=Confusion+matrix+&gs_lcrp=EgZjaHJvbWUqDAgBEAAYQxiABBiKBTIPCAAQABhDGLEDGIAEGIoFMgwIARAAGEMYgAQYigUyDAgCEAAYQxiABBiKBTIMCAMQABhDGIAEGIoFMgwIBBAAGEMYgAQYigUyDAgFEAAYQxiABBiKBTIHCAYQABiABDIHCAcQABiABDIMCAgQABhDGIAEGIoFMgcICRAAGIAE0gEIMTYwNmowajmoAgCwAgA&sourceid=chrome&ie=UTF-8) |
|  | AUC-ROC Curves | [Link](https://www.google.com/search?q=AUC-ROC+Curves&rlz=1C1VDKB_enIN991IN991&oq=AUC-ROC+Curves+&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIICAEQABgWGB4yCAgCEAAYFhgeMggIAxAAGBYYHjIICAQQABgWGB4yCAgFEAAYFhgeMggIBhAAGBYYHjIICAcQABgWGB4yCAgIEAAYFhgeMggICRAAGBYYHtIBCDI5ODNqMGo5qAIAsAIA&sourceid=chrome&ie=UTF-8) |
|  | Elbow plot | [Link](https://www.google.com/search?q=elbow+plot+in+data+science&rlz=1C1VDKB_enIN991IN991&oq=Elbow+plot+in+data+s&gs_lcrp=EgZjaHJvbWUqBwgFECEYoAEyBggAEEUYOTIHCAEQIRigATIHCAIQIRigATIHCAMQIRigATIHCAQQIRigATIHCAUQIRigATIHCAYQIRiPAtIBCTExNDQ1ajBqOagCALACAA&sourceid=chrome&ie=UTF-8) |