**LIDA Ambient Population Project**

**Work Progress**

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| --- | --- | --- | --- | --- |
| Week | Tasks | To Do | Work Done | Outcome |
| 1 (from 4th April) | Project Introduction |  |  |  |
| Dataset Study |  |  |  |
| 2 – 4 (from 11th April)  (Current) | Data Science Revision | * Summarise [Data Science YouTube Course](https://youtu.be/-ETQ97mXXF0) * Freshen up on topics:   + Stats   [Statistics for Data Science](https://g.co/kgs/iHDSAA)   * + Database / SQL   [SQL, Databases for Data Science Coursera Course](https://www.coursera.org/learn/sql-data-science?specialization=data-science-fundamentals-python-sql)   * Practise:   [Datacamp skills list](https://www.datacamp.com/tracks/skill) | * Summary video 20% complete [Data Science YouTube Course](https://youtu.be/-ETQ97mXXF0) | Basic understanding on   * Descriptive Statistics * Entropy * Information Gain * Probability   Identified required learning on   * Confusion Matrix * CLT * Sampling Distribution |
| Time series forecasting | [Practical Time Series Analysis Coursera Course](https://www.coursera.org/learn/practical-time-series-analysis?#syllabus)  [Time Series Analysis YouTube Course](https://youtube.com/playlist?list=PLvcbYUQ5t0UHOLnBzl46_Q6QKtFgfMGc3%20) (TSA1) |  |  |
| ARIMA | * Learn from * [Book Chapter on ARIMA](https://ademos.people.uic.ede/Chapter23.html%231_what_is_arima) * [Time Series Analysis YouTube Course](https://youtube.com/playlist?list=PLvcbYUQ5t0UHOLnBzl46_Q6QKtFgfMGc3%20) (TSA1) | * [ARIMA YouTube Video](https://www.youtube.com/watch?v=3UmyHed0iYE) complete | * Basic understanding on   + Acronym   + Use   + Equation and variables * Identified required learning on   + Time Series   + AR   + ARMA |
| SARIMA | [Time Series Analysis YouTube Course](https://youtube.com/playlist?list=PLvcbYUQ5t0UHOLnBzl46_Q6QKtFgfMGc3%20) (TSA1) |  | * Basic understanding on   + Acronym |
| LASSO | [Machine Learning YouTube Course](https://youtube.com/playlist?list=PLblh5JKOoLUICTaGLRoHQDuF_7q2GfuJF) (ML1)  [Statistical Regression YouTube Playlist](https://www.youtube.com/playlist?list=PLvcbYUQ5t0UFhdkiCojiFOygmbMU19BFq) | [Regularization Part 2 YouTube Video](https://youtu.be/NGf0voTMlcs)  [LASSO Regression YouTube Video](https://youtu.be/jbwSCwoT51M) | * Identified required learning on   + Logistic Regression   + Training/Testing Data   + Least Squares   + Sum of Squared Residuals   + Ridge Regression |
| Neural Networks | [Machine Learning Coursera Course](https://www.coursera.org/learn/machine-learning) |  |  |
| Validation/Cross-validation | [Machine Learning YouTube Course](https://youtube.com/playlist?list=PLblh5JKOoLUICTaGLRoHQDuF_7q2GfuJF) (ML1) | [Cross Validation YouTube Video](https://youtu.be/fSytzGwwBVw%20) 50% complete | * Basic understanding on   + Use |
| Previous Project Work | [Tom's GitHub page](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgithub.com%2Ftbalbone31%2Fambient_populations&data=04%7C01%7CI.K.Ranatunga%40leeds.ac.uk%7Ccf85e7aa82b5441c6eab08da1c8d9f37%7Cbdeaeda8c81d45ce863e5232a535b7cb%7C1%7C0%7C637853691819955811%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=OUEgreo9uINBQUJ6wzrMCdIFR%2B1CmEyK1%2BiYE1yKBoE%3D&reserved=0)  [Random Forest Notebook](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgithub.com%2Ftbalbone31%2Fambient_populations%2Ftree%2Fmaster%2FRandomForest_modelling&data=04%7C01%7CI.K.Ranatunga%40leeds.ac.uk%7Ccf85e7aa82b5441c6eab08da1c8d9f37%7Cbdeaeda8c81d45ce863e5232a535b7cb%7C1%7C0%7C637853691819955811%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=MGgmXxCU1%2BAIVAYCt2MGsAGHcwUDLXbK48YkpMvJkJE%3D&reserved=0)  [Prophet Notebook](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgithub.com%2Ftbalbone31%2Fambient_populations%2Ftree%2Fmaster%2FProphet_modelling&data=04%7C01%7CI.K.Ranatunga%40leeds.ac.uk%7Ccf85e7aa82b5441c6eab08da1c8d9f37%7Cbdeaeda8c81d45ce863e5232a535b7cb%7C1%7C0%7C637853691819955811%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=BDP87HXPLd%2BdPsOhH1AUwxmNav5mgt0WXKwQg4iP6Sk%3D&reserved=0) |  |  |
| 5 (from 2nd May) | Revised Dataset Study |  |  |  |
| Dash Board Plan |  |  |  |