Details:

* Team-size: 2 people per-team

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Day** | **Content** | **Deliverables** | **Time** | **Activity Format** |
| 0 | Program Orientation (Program Outline and Objectives) | - |  |  |
|  | Project Briefing   * [**CV Ballot Paper**](https://drive.google.com/drive/folders/1ubDd_DzZxVmbrmnyOeDO0PcRdVimdFEH?usp=sharing) * [**Multi-class Emotion Detection**](https://devblogs.microsoft.com/cse/2015/11/29/emotion-detection-and-recognition-from-text-using-deep-learning/)   + [**ISEAR.CSV**](https://drive.google.com/file/d/12jwlbgKEASZ8kKLZ1Q7mAkxuhHM_AKB0/view) * [**Car Ads**](https://www.kaggle.com/mirosval/personal-cars-classifieds) | Choice of project |  |  |
| 1. | [Requirement Gathering Session](https://docs.google.com/document/d/1aePk0gffG7yu9G-7gopZRNQrZ6tUEdIDjh1ggRYWTu8/edit?usp=sharing) | Report:- doc/Requirements.md | Day 1 | Flipped |
| Git, Github   * Feature branch workflow * [Git and Jira Integration](https://drive.google.com/drive/folders/1Uizb2AQ9ICWLN7iZyUCPwd9JuVoKN22o?usp=sharing) * Eg: [Project Structure](https://docs.google.com/document/d/1vM1vdHyNSB9RRbvZaNoqCBuBd1lFVFdJJeA_9dPJljA/edit?usp=sharing)   Environment Reproducibility: venv, pip  Project Structure | Repo with Skeletal Structure and environment   * Readme.md | Day 1 | Flipped |
| 2. | [“Agile For ML projects”](https://drive.google.com/drive/folders/1PbQp5ro4ye5D2SCEiMxbGG03i5EEj7TF?usp=sharing): User stories, Scrum, Kanban, Timelines | doc/analysis.md | Day2 | Presentation |
|  | [Project Analysis:](https://docs.google.com/document/d/1vKTEU8PgdxrUD2JXYZdhmzuG1qSzsqCAH8xgb0jVfys/edit?usp=sharing)   * Problem and solution Formulation * Performance Metrics * Baseline model choice * Milestones and timeline | doc/analysis.md | Day2 | Flipped |
| 3. | Numpy, Pandas, Matplotlib  Car ads [(EDA Doc)](https://docs.google.com/document/d/1LTp_-rR3YyQHC4_X48z_Vl0kLHQ2guOw4euS9wanM2I/edit)   * Data Visualisation * Data handling, Data Cleaning * Feature engineering | notebook/\*.Ipynb | Day 4 | Flipped  (feedback) |
| 4. | [Modeling](https://docs.google.com/document/d/18AM05dxjcIl1yEBQ0qNisFOz29kb2oOVxuLKCDLy3IA/edit#)   * Algorithm Choice * Evaluation Setup * Experiment Tracking   + Neptune.ai/[ML flow](https://mlflow.org/docs/latest/quickstart.html)/DVC * Pipeline * Model Reproducibility   Python Code-Quality and Standardisation   * [Style-guide](https://colab.research.google.com/drive/1YqJwjqhhDd4vhs1UXx--vhEwF-XVIW-1), * [Documentation](https://colab.research.google.com/drive/1Z2-ZG5lvhywvlnAbft_gT8YJ0az5qNPM) * Linter | model/\*  model/\* | Day 6 (Baseline);  Day 8 | Flipped |
|  | References:  [Organizing machine learning projects: project management guidelines](https://www.jeremyjordan.me/ml-projects-guide/) and resources listed at the bottom there.  [A Recipe for Training Neural Networks](https://karpathy.github.io/2019/04/25/recipe/) by Karpathy  Machine Learning Yearning: [Official Link](https://www.deeplearning.ai/machine-learning-yearning/) | [Pdf link](https://d2wvfoqc9gyqzf.cloudfront.net/content/uploads/2018/09/Ng-MLY01-13.pdf)(say no to piracy)  Structuring Machine Learning Projects: [Coursera](https://www.coursera.org/learn/machine-learning-projects) | [Youtube channel](https://www.youtube.com/watch?v=dFX8k1kXhOw&list=PLkDaE6sCZn6E7jZ9sN_xHwSHOdjUxUW_b&index=1) |  |  |  |
| 5 | Remote server access/training:   * Training   + [AWS](http://aws.training) : EC2, AMI, S3, EBS   + General: SSH, tunneling, Tmux, Logs * Server: <optional> | Local server / cloud academy / [qwiklabs](https://www.qwiklabs.com/quests/23)/ pluralsight | - |  |
| 6 | + Progress Reporting | Google suite presentation slides  Numbers in sheets  Rest docs | Day 6 |  |
| 7 | Web Framework (Flask) Overview  REST  Pymongo | api/\*.py | Day 7 | flipped |
| Reproducibility and [Deployment](https://docs.google.com/document/d/1sVYzlJrcBYbLIf_qWUtAetz7eTpMMvnDJOUlwPkKTqM/edit#heading=h.d8tar7ngj8cn)   * Reproducibility when required * Deployment - Docker * Instructions | Requirements.txt / environment.yml / Dockerfile README.md | Day 7 |  |
| 8. | Reporting |  | Day 8 |  |
| 9. | BREAK | BREAK |  |  |
| 10. | Second project Reporting | Primary - Notebooks in github Secondary - Rest of the above | Day 10 |  |