|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Time Sheet for: | | | | | | <Your name here> | |
| Covering time period: | | Sept 🗶  Jan 🞏 | | | Oct 🞏  Feb 🞏 | | Nov 🞏  Mar 🞏 |
| Date: | Start Time: | | End Time: | Description: | | | |
| 05.11 | 8:00 | | 8:20 | * Presentation of the previous project | | | |
| 05.11 | 8:20 | | 9:00 | * Setting up working environment   + Python   + Anaconda   + Pydotplus   + Tensorflow   + Pandas library   + NumPy   + Udemy Jupiter course materials | | | |
| 05.11 | 9:00 | | 9:20 | * Exploring Jupiter examples * Testing Pandas library, displaying CSV files as tables and manipulating them | | | |
| 05.11 | 9:20 | | 9:35 | * Types of data research (numerical, categorical, ordinal) * Recap of mean, median, mode * Trying it in python | | | |
| 05.11 | 9:35 | | 9:50 | * Variation, population and sample variance, standard deviation research (used to identify outliers) * Trying it in python | | | |
| 05.11 | 9:50 | | 10:00 | * Probability Density (continuous data) & Probability Mass (discrete data) research | | | |
| 05.11 | 10:00 | | 10:15 | * Steve talk about creating custom circuit boards | | | |
| 05.11 | 10:15 | | 10:25 | * More data distributions research (Uniform, Normal / Gaussian, Exponential, Binomial & Poisson Probability Mass) | | | |
| 05.11 | 10:25 | | 10:40 | * Percentiles and Moments (mean, variance, skew, kurtosis) * Trying it in python | | | |
| 05.11 | 10:40 | | 11:15 | * More research on MatPlotLib to create better looking graphs (multiple plots, adjust axes, ticks, grid, add legend, plot pie & bar chart, scatter plot, box & whisker, save to file) | | | |
| 07.11 | 10:00 | | 10:50 | * Another graphs library research – Seaborn * Advanced visualization | | | |
| 07.11 | 10:50 | | 11:25 | * Covariance & Correlation understanding * Research on ways to measure it * Coding it hard way in Python and using NumPy functions | | | |
| 07.11 | 11:25 | | 12:00 | * Conditional Probability recap * Ways to compute * Creating fake data in Python and practicing this concept | | | |
| 14.11 | 9:00 | | 9:30 | * Studying Bayes Theorem * Understanding its significance * “The probability of something given something else is not the same thing as the other way around” | | | |
| 14.11 | 9:30 | | 9:50 | * Starting with Regression Analysis * Linear Regression research * Practicing this concept in Python | | | |
| 14.11 | 10:00 | | 10:25 | * Polynomial Regression research * Trying the concept in Python (PyPlot function is amazing) | | | |
| 14.11 | 10:30 | | 11:00 | * Multiple Regression research * Standard notations in Machine Learning (X – data we encounter; y – something we try to predict) * Statsmodels library practice, helps to compute OLS Regression and print meaningful results for analysis * Using this data to make an actual prediction by scaling my desired variables for prediction into the same scale used to train the model | | | |
| 19.11 | 8:00 | | 8:20 | * Research on multi-level models, understanding the complexity and use of the concept, setting some goals for future (the topic is way beyond the scope of this project) | | | |
| 19.11 | 8:20 | | 9:00 | * General research on Supervised and Unsupervised Machine Learning * Research on Train/Test supervised learning concept * Introduction to K-fold Cross Validation (supervised machine learning approach) * Using Train/Test in Python to prevent overfitting a polynomial regression | | | |
| 19.11 | 9:00 | | 9:40 | * Helping out the classmate with his Python problem * Python IDLE could not find the module, even though it was installed, turned out the IDLE was using different Python version from the one where the required module was installed, so had to figure out how to install the module to the right place. Everything works now. | | | |
| 19.11 | 9:50 | | 11:00 | * Bayesian Methods research (making use of Bayes Theorem for machine learning) * Understanding how it is applied in spam detection systems * Assumption that the presence of different words are independent of each other is reason why the concept is called “Naïve Bayes” * Scikit-learn library makes this process pretty easy * Implementing a Spam Classifier in Python using Scikit-learn (the easy way) | | | |
| 21.11 | 10:00 | | 10:30 | * Steve talk about not getting shocked/electrocuted | | | |
| 21.11 | 10:30 | | 10:50 | * Continue to experiment with Spam Classifier * Example looks and works great, but how smart it actually is? * Tried splitting training data into train/test subsets and trying the model on numerous unknown spam mails (now classifier fails quite often – 45% fail on 500 test data taken 2400 training data) | | | |
| 21.11 | 10:40 | |  |  | | | |
| 21.11 |  | |  |  | | | |
|  |  | |  |  | | | |
|  |  | |  |  | | | |
|  |  | |  |  | | | |
|  |  | |  |  | | | |
|  |  | |  |  | | | |
|  |  | |  |  | | | |