**Wildfire Predictions – Applied Machine Learning**

**PLAN**

DATA

FIRE

* Fire burned area
* Fraction of burnable Area

ERA5 Reanalysis

* Variable List to be decided

MODELS

1. Simple Regression Model
   1. Determine important variables (Variable Importance)
   2. Split Data (60% Training, 20% Evaluation, 20% Test)
      1. Make sure that Fire is evenly distributed
   3. Stanradize (normalize + center) the data (but not the target variable!)
   4. Make netCDF into pandas dataframe (using ravel or flatten)
2. Spatial Regression Model
   1. Use only selected features
   2. CNN
   3. Netcdf -> Tensorflow / PNG (ask Troels)
   4. Generate more data (rotate/… dataset)
3. Temporal Regression Model
   1. Use only selected features
   2. GRU / LSTM
4. Future Predictions
   1. On hold for now because variables are so different than ERA5
   2. CMIP5