Project Proposal

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ECE532 Project: Weather Forecasting

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- **Project Dataset**:

  https://www.kaggle.com/budincsevity/szeged-weather

  This is a dataset including an hourly summary/daily summary for Szeged, Hungary area between 2006 and 2016. This dataset includes data in the hourly response for: Time/summary/precipitation Type/temperature/apparent Temperature/humidity/wind Speed/wind Bearing/visibility/loud Cover/pressure.

  The labels are shown as “summary” for “partly cloudy”, “mostly cloudy”, “overcast”, “foggy”, “clear”.

  The project will do the “weather forecasting” work, which means use the data points like “rain”, “22.7C”, “humidity 37%”, “wind speed 5.18km/h”, etc, to get the summary result, that is partly cloudy in this example.

- **Algorithms that will be investigated**:

  1. Linear regression
  2. K-nearest neighbors
  3. Neural Networks

  Compare the result from these algorithms with the actual weather condition.

- **Project Github**: https://github.com/CrosRichardCH/ECE532-Project
- **Project timeline**:

  Stage 1: Oct 22nd – Nov 17th

  Applying linear regression and k-nearest neighbors on the dataset and analysing the results.

  Stage 2: Nov 18 – Dec 1st

  Applying neural networks on the dataset and analysing the results.

  Stage 3: Dec 2nd – Dec 12th

  Finish the final report