

Introduction

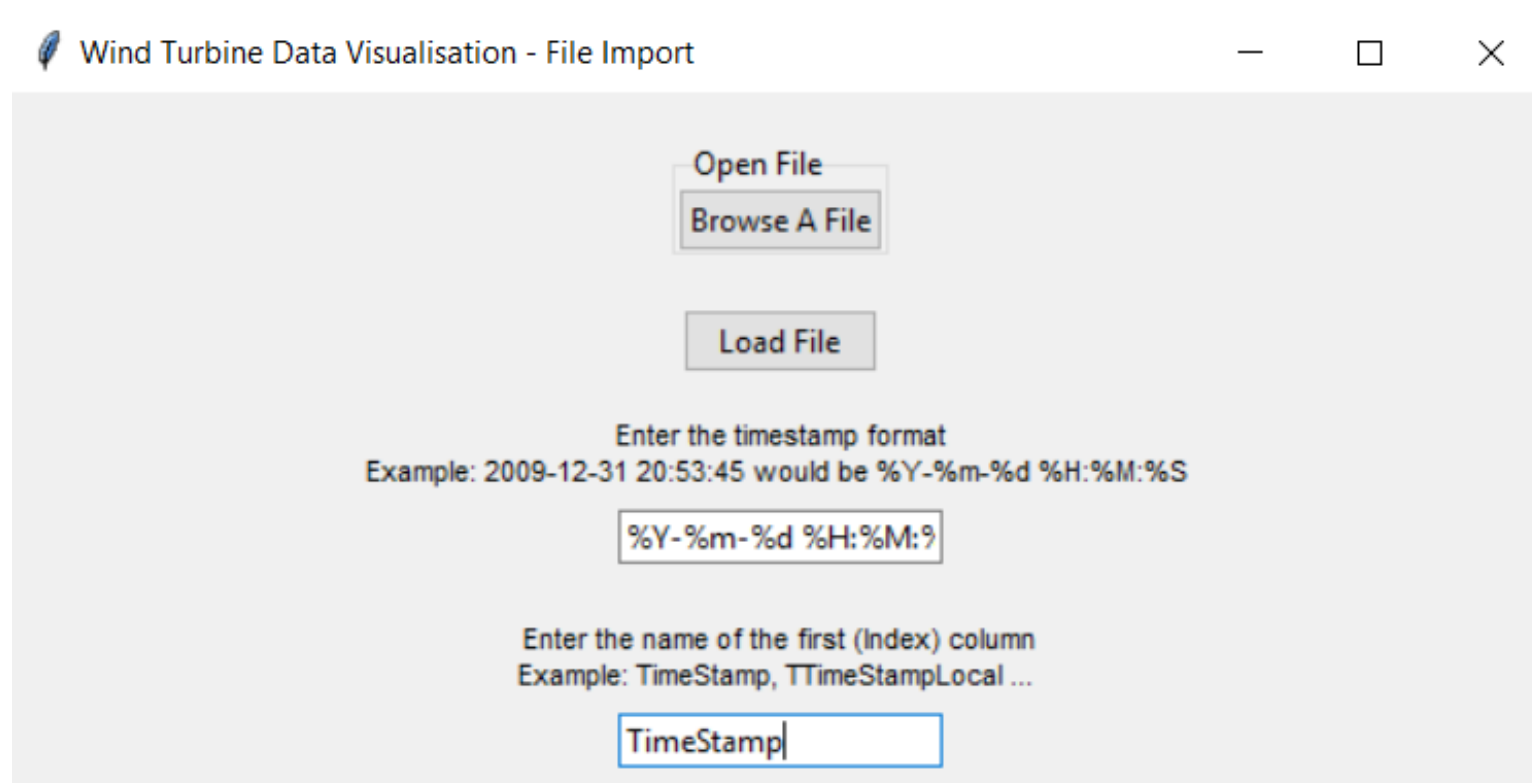
- Aim was to write a graphical user interface that can simplify the process of visualising big sets of raw operational data
- This type of data visualisation is useful in predicting failures and remaining useful life of wind turbines
- Knowledge of coding is not necessary - app can be utilised by people from different backgrounds
- The application inputs a data file as a .csv or .xlsx and lets user visualise big sets of raw turbine data as time series, scatter plot and histogram.
- User-friendly: flexibility to modify, resample and export the dataset.

Application Overview

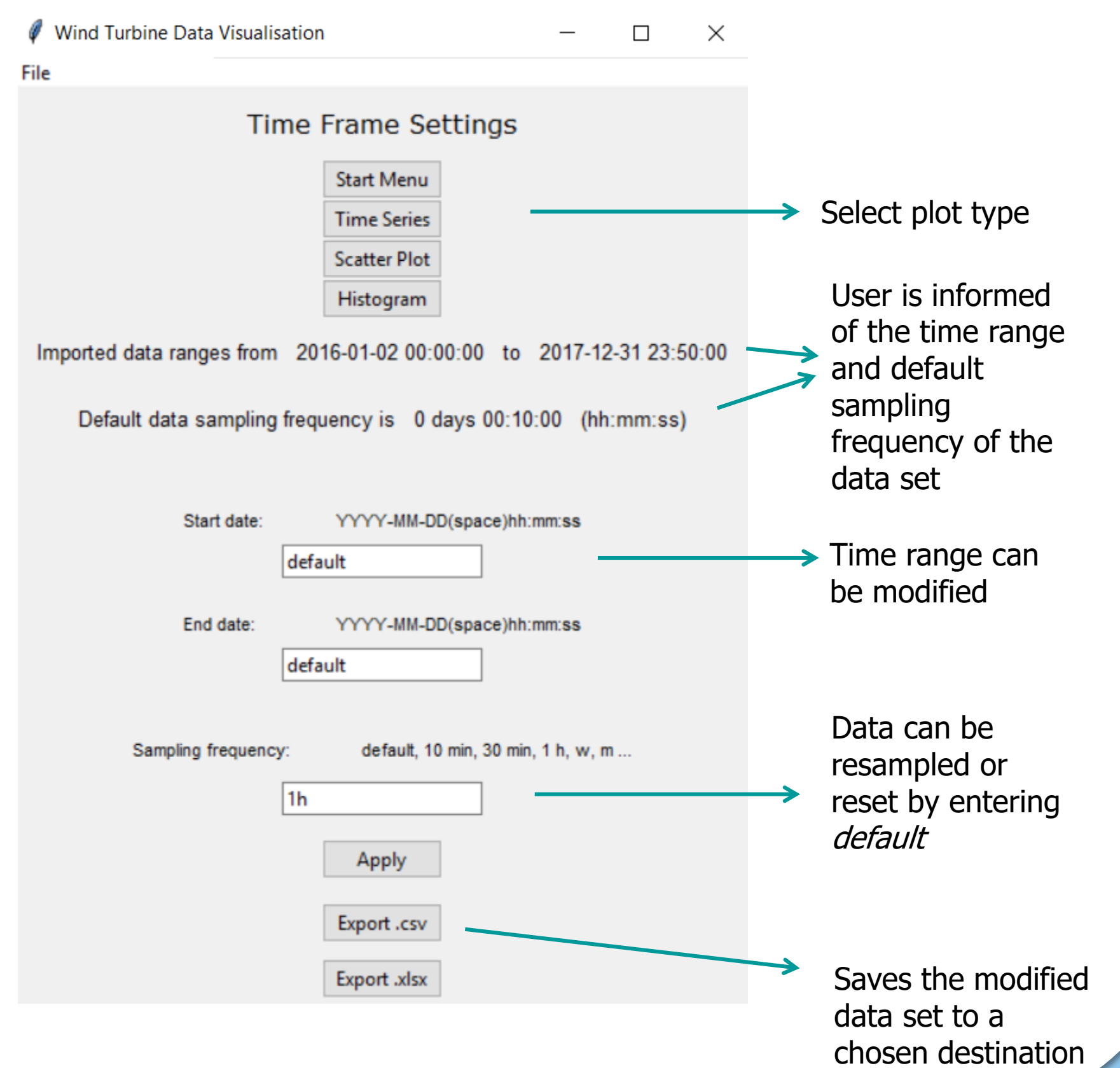
- Software used: Python 3.7, Anaconda, Tkinter, Matplotlib, Pandas, NumPy
- Functionalities:
 - Upload a .csv or .xlsx file
 - Input any timestamp format
 - Pop-up window notifies the user about wrong input
 - Plot Time Series, Scatter Plot, Histogram
 - Zoom/Edit/Export graphs via toolbar
 - Change data range (Start/End date)
 - Change sampling frequency
 - Export the edited file as .csv or .xlsx
 - Additionally compiled as .exe, so the application does not require Anaconda or Python to run

Uploading a file

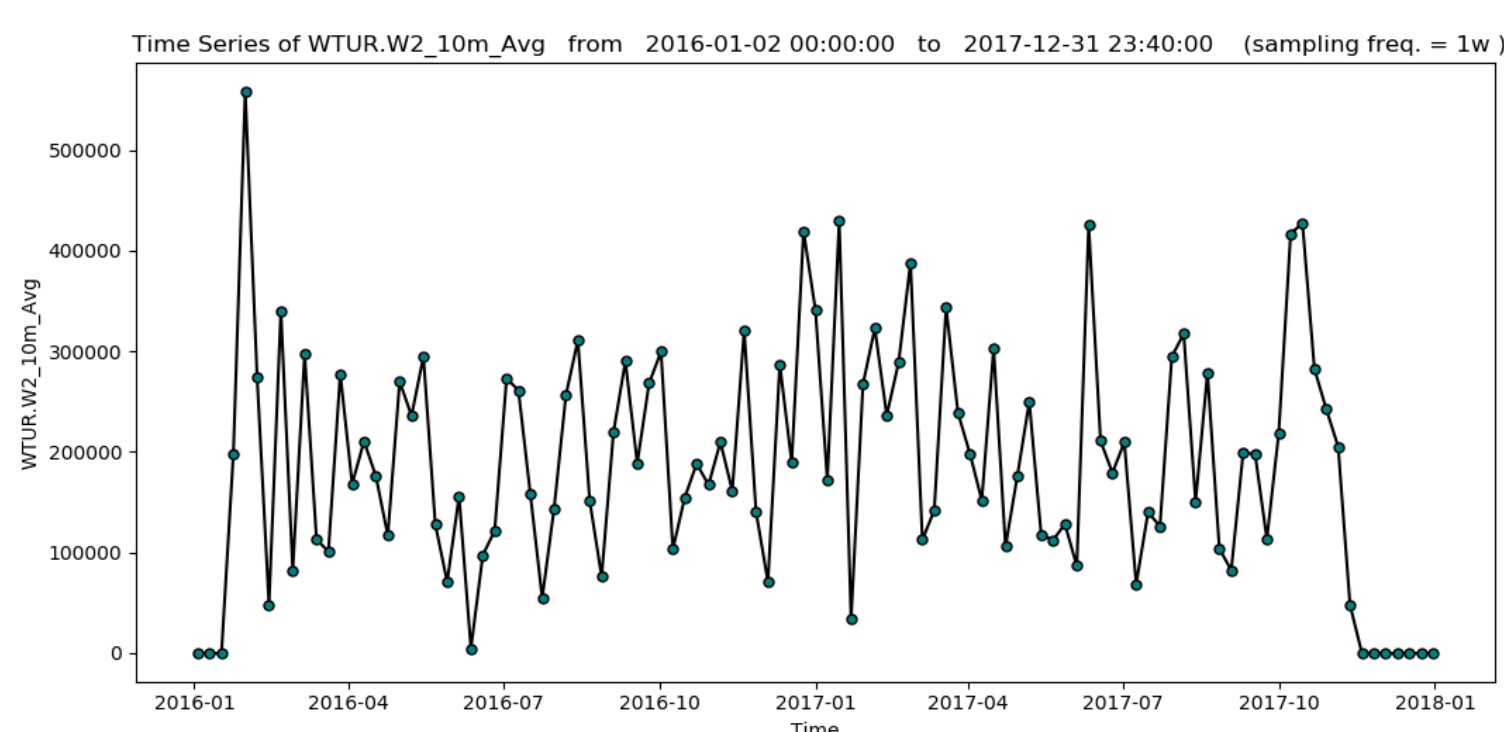
- User inputs Timestamp format and name of the Index Column



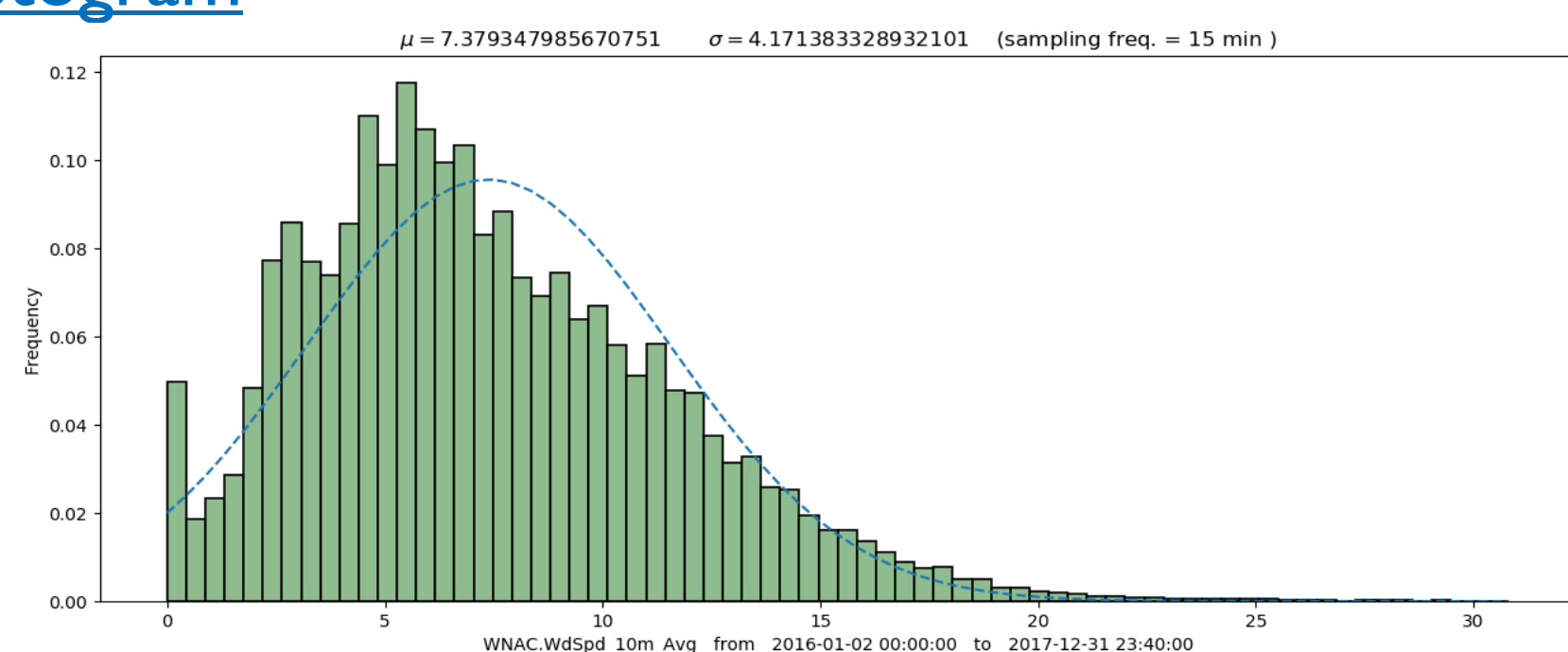
Dataset modification



Time Series



Histogram



Scatter Plot

