**Problem statement:**

Polypropylene is a thermoplastic polymer. It is produced via chain-growth polymerization from the monomer propylene.

Reactors were fed with chemicals and other conditions such as temperature and pressure was kept intact accordingly to produce polypropylene. **We had the challenge of real time prediction of polymer quality based on the live feeds data.**

The quality of polymer is measure against its MFR (Melt Flow Rate) value.

MFR values are estimated in lab every two hour, i.e. a sample every two hour is collected from the produced polymer and sent to lab for getting its MFR value.

Attached data is having following columns:

**'513FC31103.pv'**: Propylene flow

**'513HC31114-5.mv'**: Hydrogen ratio

**'513PC31201.pv'**: Pressure controller

**'513LC31202.pv'**: Level controller

**'513FC31409.pv'**: Liquefied Recycle gas to R-310 dome top

**'513FC31114-5.pv**’: Hydrogen Flow

**'513TC31220.pv'**: Temperature controller

**'MFR'**: MFR value at the time.