



K. N. Toosi University of Technology

**Faculty of Physics
Educational Group of
Atomic-Molecular and Astronomy**

Special Topics I Final Projects (Project 1 - Corona Virus)

by
Ali Bagheri Koochaksaraei

Teacher
Dr. Mohammad Hossein Zhoolideh

**Academic Year 1402-1403
(First Semester)**

Overview

In this project, the data related to the corona virus, including confirmed cases and the number of fatalities by country and region, have been provided to you, which you can download from this link. We want you to design a model that can be used to predict confirmed cases and deaths between March 25, 2020 and April 22, 2020 by region. For each **ForecastId** in the test set, you'll predict the cumulative COVID-19 cases and fatalities to date.

Note: The given data is raw. To answer this question, you must first preprocess the data using the Pandas package.

Important Points

Be sure to

- Leave appropriate comments for different parts of your code.
- Completely explain about the algorithm(s) you use to answer this question.
- Use **model selection**, **feature engineering** and **feature scaling** in your code.
- Measure your model performance using model evaluation metrics and interpret the obtained result(s).
- If you used a specific book or article in your project, mention it in your notebook.

A part of your score will be allocated to these items.

* You should write all the steps of your project in the **Jupyter notebook** and upload it as a file with the **.ipynb** extension on the vc site.