

Group Project

The Spectrum Data Challenge!

Grade: 20%

Project Description:

1. You will be given access to a large worldwide spectrum database containing data on various spectrum allocations done worldwide since 1994 until 2020. There will be a corresponding data description file that will also be shared.
2. After understanding the dataset, you have to create a project with a stated objective. Examples of the objectives are given below:
 - a. Analysis the 3G spectrum auctions took place during 2001-2002 in Europe
 - b. Analysis of the 5G auction of 3.3-3.6 GHz spectrum that took place worldwide during 2019-2020.
 - c. Predict the spectrum prices in India in future.
3. Use an appropriate methodology such as data visualization, cluster analysis, regression, principal component analysis, Logit models, hypothesis testing to analyse the spectrum database.
4. Present your results in a poster format for me to assess and evaluate.
5. **Best 3 projects** with potential for publication will be selected; the Faculty will work with the respective groups next term or during summer to provide the finishing touches to the data analysis and publish the paper or present in a conference.

Due dates:

1. Abstract outlining the objective, and what data, methods will be used - **due on 1 Apr 2021 – 5%**
2. Final deliverable in a poster format due on **30 Apr 2021: 15%**.

Notes and precautions:

1. The spectrum database has been shared by the research firm Dotecon in UK to the Faculty for use strictly for academic purposes. **Hence the database in full or partial should not be shared in a public web site, social media or in any electronic form to others or any other third party.**
2. **Any violation to (1) above will attract stringent penalties in course grade as well as disciplinary action.**