

Project Proposal for the course Theory of Fuzzy Systems (CSE 573)
Dept. of ECE, North South University
Spring, 2020

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1. Project title:	Fuzzy Time Series Analysis of the Covid-19 Epidemic
2. Objective of the project:	<ul style="list-style-type: none">i. To study, implement and use different fuzzy logic algorithms for the analysis and forecasting of the Covid-19 epidemic.ii. To apply the known techniques to more up-to-date datasets to validate the previous works.iii. Analyzing the epidemic data of various countries with different demography, weather and economic status to extract meaningful information.iv. Comparing the outcome of fuzzy algorithms with other machine learning and data mining techniques for comparison between the models.
3. Usefulness of the result:	<ul style="list-style-type: none">i. Better Understanding of the epidemic spread rate with weather, economy, and other variables.ii. Will help the governments and non-government organizations to better prepare for the epidemic in countries yet to be affected.
4. Data to be used:	Covid-19 day to day infection data of USA, EU and Asian countries
5. Model evaluation criteria:	Root Mean Square Error (RMSE) will be calculated with the test data
6. Platform and tools to be used:	Anaconda-Python, Numpy, Scipy, Scikit Learn 3 rd party library: PyFTS (MINDS - Machine Intelligence and Data Science Lab, Federal University of Minas Gerais)

7. Team Members:	<ul style="list-style-type: none"> i. Mohammad Minhazul Alam (1935365650) ii. S.M. Shahadat Hossain (1935190650) iii. Md. Romman Riyadh Shishir (2016652650) iv. Md. Abdul Motaleb (1935369650) v. Sabrina Yeasmin (1935074650) vi. Sadman Hasan (2016160050) vii. Eumna Huda (1925395050)
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