

	<b>FORM FOR PROPOSING A TOPIC IN THE SECOND CYCLE OF STUDIES</b>	Oznaka	
		Datum usvajanja	09.04.2020
		Datum/Br. revizije	-
		Stranica	1/1

Department	Department of Information Technologies
Master thesis title:	Predicting Covid-19 Patient Recovery Using Machine Learning Methods
Mentor/professor - contact: Co-mentor/professor contact:	Nermina Durmić (nermina.durmic@ibu.edu.ba)

Thesis background:	Machine learning and data science are finding its appliance in all segments of human life by studing and analyzing data through machine learning algorithms in order to make predictions or decisions. Different algorithms apply based on different type of data and type of problem that is intended to solve. GLobal pandemic COVID19 is the newest filed where ML tries to contribute in human fighting against it. By applying different ML algorithms on historical data its possible to discover patterns and try to predict patient recovery.
Thesis objective:	Apply classification algorithms on historical data about COVID 19 pandemic. Create clustering models based on recovery pobabilities.
Literature:	<ul style="list-style-type: none"> <li>- Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies, 1st Edition by John D. Kelleher (Author), Brian Mac Namee (Author), Aoife D'Arcy (Author).</li> <li>- Understanding Machine Learning: From Theory to Algorithms, 1st Edition by Shai Shalev-Shwartz (Author), Shai Ben-David (Author)</li> <li>- Muhammad, L.J., Islam, M.M., Usman, S.S. et al. Predictive Data Mining Models for Novel Coronavirus (COVID-19) Infected Patients' Recovery. SN COMPUT. SCI. 1, 206 (2020). <a href="https://doi.org/10.1007/s42979-020-00216-w">https://doi.org/10.1007/s42979-020-00216-w</a></li> <li>- Mohammadreza N., Jamal A., Nazafarin N. Machine-Learning Approaches in COVID-19 Survival Analysis and Discharge-Time Likelihood Prediction Using Clinical Data. Patterns, Vol1 Issue 5, 100074. (2020). <a href="https://doi.org/10.1016/j.patter.2020.100074">https://doi.org/10.1016/j.patter.2020.100074</a></li> <li>- Latif, Siddique &amp; Usman, Muhammad &amp; Manzoor, Sanaullah &amp; Iqbal, Waleed &amp; Qadir, Junaid &amp; Tyson, Gareth &amp; Castro, Ignacio &amp; Razi, Adeel &amp; Kamel Boulos, Maged &amp; Crowcroft, Jon. (2020). Preprint: Leveraging Data Science To Combat COVID-19: A Comprehensive Review. Research Gate 10.13140/RG.2.2.12685.28644/4.Available: <a href="https://www.researchgate.net/publication/340687152_Preprint_Leveraging_Data_Science_To_Combat_COVID-19_A_Comprehensive_Review">https://www.researchgate.net/publication/340687152_Preprint_Leveraging_Data_Science_To_Combat_COVID-19_A_Comprehensive_Review</a></li> </ul>

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