

HONORS THESIS  
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*Ranking Instagram Preferences: Get to know your friends  
better through experimental mathematics*

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**Abstract:** Ranking methods offer remarkable potential in creating and revamping recommendation systems. The task of suggesting relevant and attractive content to users is directly benefited by improving ranking techniques. With graph ranking as the mathematical foundation on which recommendation systems are built, vertex prestige is a critical problem to be addressed. Several models exist that rank vertices in a graph. However, we explore the following methods: HITS, Dominant Eigenvector, and PageRank. We aim to emulate a recommendation system by first gathering primary data from Instagram by tracking the activity of nine participants on the app. With the help of the three ranking methods, we intend to provide our recommendation to the participants based on having accessed their past preferences.

Thursday, April 7, 2022, 10:00 am  
Mathematics and Science Center: MSC E406

Thesis Advisor: Manuela Manetta

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