FALL 2022

UNDERGRADUATE RESEARCH SYMPOSIUM

WINNERS

Most Popular Project

Identifying the Relationship Between Economic Conditions and Entertainment Choices

Presenters: Chen, Yumeng; Lu, Shan
Project Subjects: Business; Data Science; Economics
Faculty Mentor: Ishihara, Masakazu

Why do people sometimes prefer relaxing country music, whereas at other times they are more open to heavy metal songs? Previous literature shows that people's entertainment choices are sensitive to macroeconomic trends; they tend to purchase lighter cultural products during recession periods and switch to heavier ones during booms. By analyzing people's entertainment choices in the music and movie industries, we found a negative relationship between economic conditions and the valence of the products consumed, which supports the "mood management" theory. Our study is the first to examine how changes in economic conditions affect entertainment choices with a weekly measure.

Best Research Project

How Sexual Minority Men Should Plan "Coming Out": Lessons from Straight People's Reactions

Presenter: Huang, Xiaoyu
Project Subject: Social Science
Faculty Mentor: Li, Gu

This project studied Chinese heterosexual adults' reactions to a sexual minority adult man disclosing his sexual orientation ("coming out") with various strategies. A survey was conducted on a sample size of 500 Chinese cisgender heterosexual adult participants' perception of 32 potential "coming out" strategies that may be used by sexual minority men and their experience where a sexual minority man "came out" to them. The findings will identify "coming out" strategies that are best received by heterosexual people in China, which will inform those who decide to "come out."

Best Presentation

What is a Neighborhood? —Redefine the Sociological Concept of Neighborhood via Mental Mapping

Presenter: Zha, Yuhong
Project Subject: Social Science
Faculty Mentor: Li, Angran

The neighborhood effect has been recognized and studied in world academia as an important and complicated phenomenon. This study argues that before identifying the neighborhood effect, researchers need to define the neighborhood first. Using the quantitative method to define a neighborhood cannot well-represent the neighborhood from residents' perspectives. Abundant empirical evidence was collected based on mental mapping exercises and interviews, emphasizing the value of mental mapping in defining neighborhoods and identifying the socialization mechanism of how people's perception of neighborhoods is socially constructed particularly in the Chinese local context, therefore contributing to the general studies on neighborhood effect.

STEM & MEDIA

Best Research Project

Trash or Treasure:
How to Utilize Emojis in Social Media Sentiment Classification

Presenter: Chen, Bale
Project Subject: Data Science
Faculty Mentor: Laurière, Mathieu

Social Media Sentiment Analysis (SMSA) has become a popular topic in Natural Language Processing, which can help monitor social trends and emotions. Besides, emojis have also been prevalent due to its efficiency in embedding emotional cues in written text, but treated as useless tokens to be cleaned out. Therefore, we probe into possible methodologies to include emojis in the SMSA process. Also, we investigated the emoji-compatibility of Transformer-based models. This study bridges the literature gap about encoding emojis with BERT-based encoders, strongly indicates that emojis improve the models' performance, and proposes a feasible and promising methodology for SMSA.

Best Presentation

Realtime AR Performance Enhancement

Presenters: Guo, Yuanhe; Yu, Morui
Project Subject: Interactive Media Arts
Faculty Mentor: Godoy, Marcela

This project is a live performance enhancement using augmented reality technology. We use Blender for 3D modeling, OpenCV-python for camera pose estimation, and Touchdesigner for real-time rendering. No extra hardware is required except for cameras and a pc or a mac. Visual effects we made are affected by the elements of the music, and their positions are matched with the real scene. They are placed over the input video stream and can be streamed onto any display. With our performance enhancement, audiences can enjoy a more immersive experience in places like the school auditorium.