

# Emotion contagion model for dynamical crowd path planning

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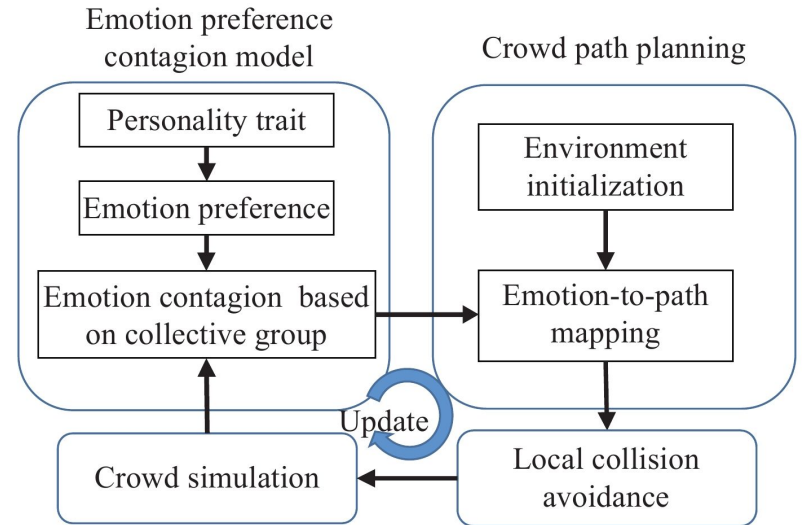


# Introduction

- Efficient crowd path planning crucial for urban transportation management or emergency evacuations
- Exploring how people's personality traits affect their movement in such situations as well as others around them

# Methods

- Five key traits: Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism
- Translated to distance or velocity preference
- Contagion of emotion





## Proposed improvements

- Panic contagion
- Clustering algorithm evaluation
- Enhanced navigation graph
- Corrected orientation similarity calculation

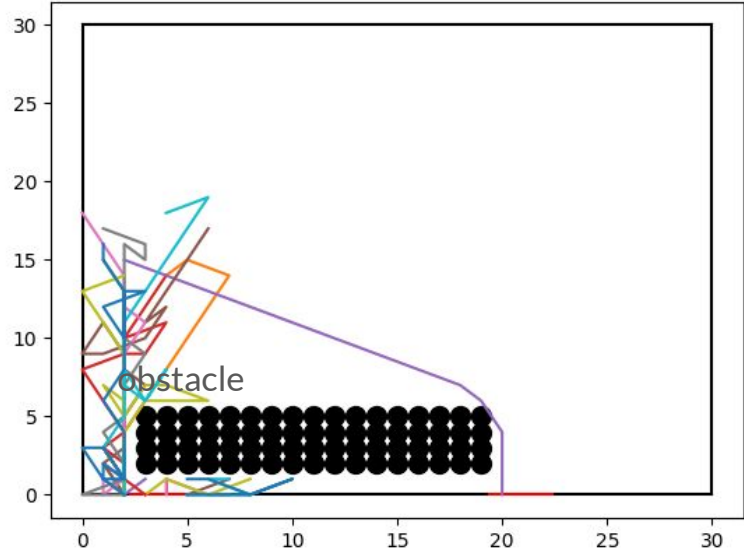


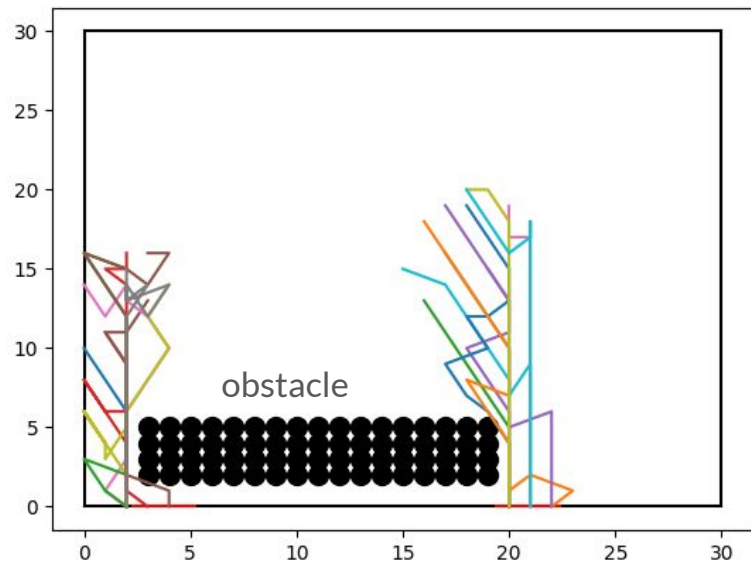
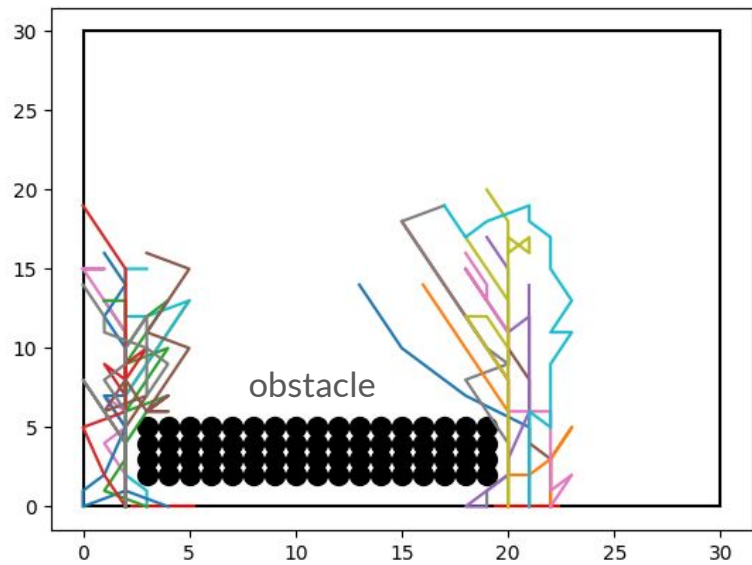
## Panic contagion

- Panic parameter, agents will freeze or move randomly, decreases with time
- Panic increases by contagion or when agent is near a source of panic (e.g. fire)

# Results

- Change of clustering algorithm appears to not influence the result
- Panic parameter induces erratic movement







## Discussion

- Change of clustering algorithm appears to have no visible influence on the result
- Many aspects of the implementation had to be reinvented, for example the navigation graph
- Alternatives for the navigation graph or implementation of continuous time