FRIteza

Simulation of group behaviour during a protest

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Collective behaviour course research seminar report

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The purpose of our project is to study the behavior of a crowd during a protest. In order to so, we will first create a unified modular development environment that implements the basic flocking model.
Then we will add obstacle avoidance and place the model in a topological map of Ljubljana. Furthermore, we will divide agents into different groups (e.g. leader, regular protest member and bypasser) and create different behavioural patterns for each group based on group psychology.
Finally, we will add agents for crowd control (e.g. police) and examine the effect they have on the behaviour of the crowd.
Optional: we will attempt to optimize police behaviour with methods such as genetic algorithms (the purpose being crowd dispersal or redirection).

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Methods

Related work

Methodology

Results and discussion

Conclusion

CONTRIBUTIONS. NČ created the map, PNM implemented the model, PM created the visualization, LB wrote the report.

Bibliography

1. Lemos C, Coelho H, Lopes RJ (2014) Agent-based modeling of protests and violent confrontation: a micro-situational, multi-player, contextual rule-based approach.
2. Park A et al. (2020) Testing various riot control police formations through agent-based modeling and simulation. pp. 0765–0770.
3. Poler Kovačič M (1994) Vid pečjak: Psihologija množice: Ljubljana: samozaložba, 1994. *Teorija in praksa: revija za družbena vprašanja* 31(1/2):187–188.

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