

# **Restaurant Occupancy Prediction (Inspired From Minority game)**

Group 3

# Overview



Problem Statement



Product Description



Sub-team  
Description/product  
Implementation



Project Roadmap



Demo video

# Problem Statement



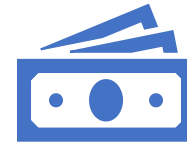
Uncertainty of turnout  
because of the pandemic  
restrictions



No prior knowledge of  
what to expect of how  
good the business will be



Restaurants are spending  
more in variable cost by  
being open



Restaurant managements  
need external support to  
cut unnecessary cost

# Product Description

- An application that a restaurant owner/management can use to visualize expected turn-out
- Using highly sophisticated statistical model to simulate what the turn-out might look like
- Using important information about the local areas to predict the turn-out relative to the state covid-19 guidelines
- Extending the minority game formula and adding group decisions to accurately simulate human behavior in given conditions

# Sub-team Description



## **Sub-team 1:**

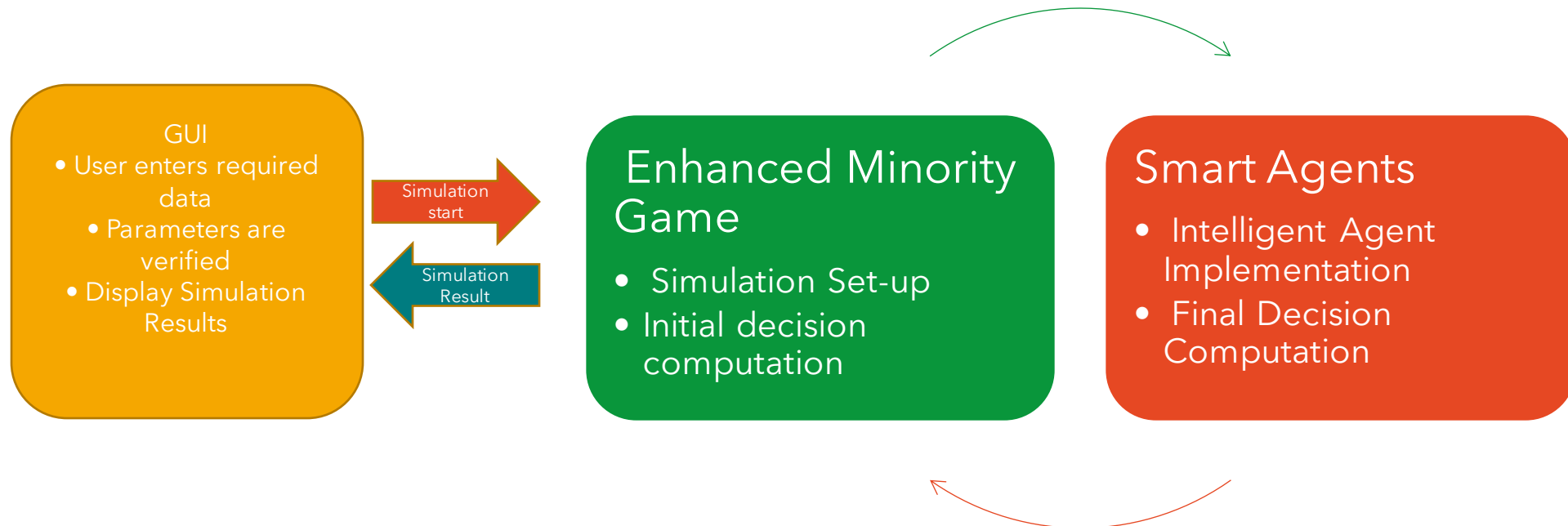
Intelligent Agents that use group decisions to simulate realistic turnout



## **Sub-team 2:**






























Focused on external factors to perfect the influence of the change in various parameters on the overall turnout

# Final Product Implementation



# Project Roadmap template

Today  
▼

	10/18-10/30	11/1-11/15	11/16-11/30	12/1-12/11	
GUI	 GUI Design	 Parameter Implementation  Control buttons	 Graph outputs and layout  Past simulation	 Complete Past simulation  Parameter Description	
Simulation Engine	 Brain storm Strategies  Brain storm group Decisions  Initial layout implementations	 Start strategy evaluation  Group strategy & decision implementation  Random strategies	 Finish Strategy evaluation  Group/Agent Personality Expansion  Virus Simulation Implementation	 Finalized simulation results  Finalized agent interactions	 Sub-team 2  Sub-team 1
Integration			 Initial integration	 GUI integration  Simulation Integration	
Testing		 Start GUI testing  Group Personality Testing	 Automated Testing  Group Interaction Testing	 Integration testing  Finish GUI testing	

# Video Order

- Database explanation : Eric Robles
- Sub-team 2's video: Tanvir Singh
- Final produce + Sub-team 1 Video: Christopher Rosenberger and Austin Bae

