

# Pacman

## A robot implementation

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# Outline

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  - Team Introduction
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  - Digital Vs. Robots
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  - Visual Representation of the Game Field
  - Bluetooth Communication between Robots
  - Actor Strategies
  - Try to beat the ghosts!
- 3 Conclusion

# Team-Namco



# Why Pacman?



Requirements Game Well Known

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# Why Pacman?

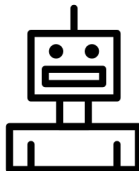


Requirements   Game   Well Known

# Digital Vs. Robots



- Agents can Coincide
- Dynamic Appearance
- Controlled Environment
- Teleport



- Robots can not Coincide
- Static Appearance
- Environmental hazards
- No Teleport



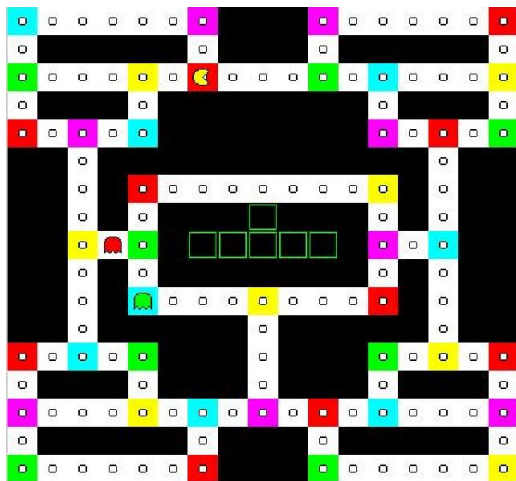


- Eat all Pac-Dots
- Avoid being trapped

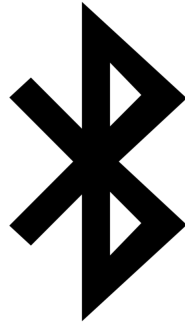


- Trap Pacman

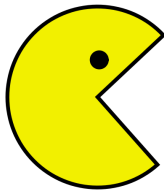
# Field Representation



# Bluetooth Adventures



# Pacman Strategy



Which path do I like?



Which path should I avoid?

# Ghost Strategy



Where can I trap Pacman?



Where will my team go?

# Play as Pacman!





- Bluetooth
  - Robot-Sensors
  - 1-step ahead strategy
- 
- More ghosts
  - Remove field-feedback



- Ghost cooperation
  - Playable Pacman
- 
- Multi-player
  - Reinforcement Learning