#### FINAL



# Pommerman







The shuwei shi

WEI CHENG



Universit

#### Overview





Input features and model



Training tools



Reward shape



Training strategy



### Input Feature & Model



#### Features:

- 2D features
- Look ahead
- One-hot encoding

#### CNN:

- No padding
- No pooling
- Large channels



### Training Tools

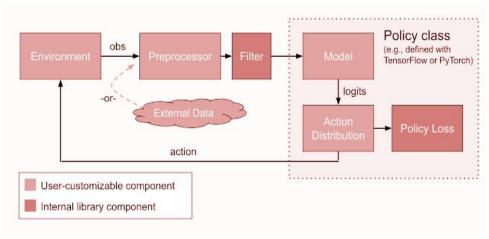


#### **RLlib**

- Built-in Loggers
- PyTorch & TF
- Multiple RL algorithms
- Decoupled Envs & Models

#### **Compute Engine**

- GTX 2080 (PC)
- P100 (GCloud)



### Reward Shape

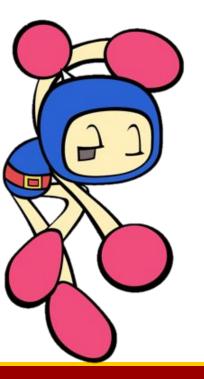


- Explore new area
- Place bombs near woods and enemies
- Get bonus (ammo/blast strength)
- Increased reward for killing enemies



## Strategy





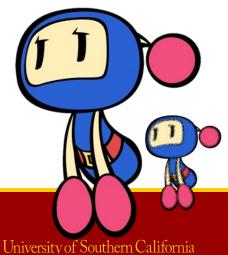
- Random Start Points
- Curriculum Learning
  - 1. Static agent
  - 2. Random Actions agent without bombs
  - 3. Random Actions agent
  - 4. Simple Agent (BOSS)



### Demo









Thank You!



