Learning to Play Starcraft II by Mimicking the Pros: Style Extraction in Adversarial Games
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Problem
Pro Starcraft players must prepare for weeks in order to face difficult opponents, often devising novel strategies specifically to combat an opponent’s particular play-style. Players then practice these strategies anonymously online to hone their advantage. Is it possible to determine a player’s identity given a sample of their play?

Data
Features
Features were extracted with the help of deepmind’s PySC2. Categorical features are interpreted through one-hot embedding layers, Scalar features are interpreted as normalized inputs.

Models
Dual-pathway networks are used to encode both screen features and minimap features. Multi-objective learning is used to force learning of subconcepts.

Discussion
The styles of some players are very distinct (SpeCial, Lambo), whereas other players tend to have styles which are harder to distinguish (Has, ShoWTimE)

Future Work
- Can temporal information be used to encode strategy as well as style?
- Can a policy network be trained to imitate a style?

Reference