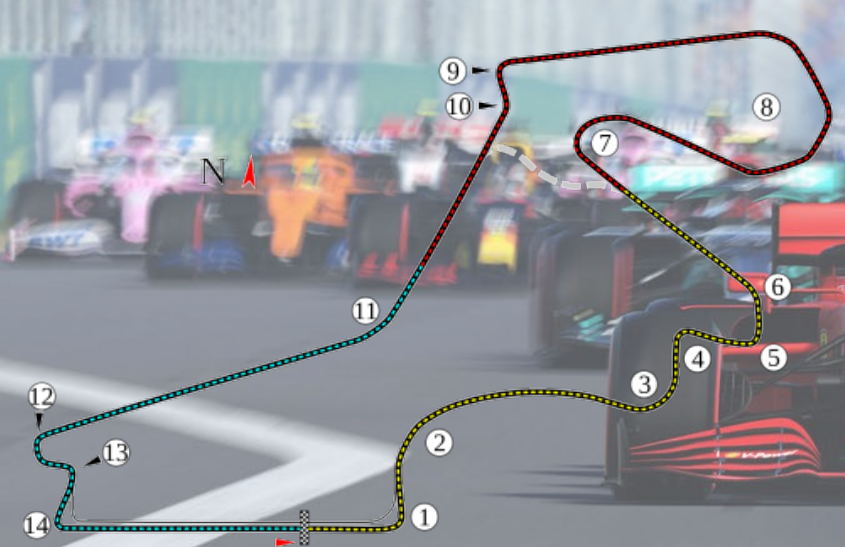# Pole Position

- 2d car racing game
- ↑: Accelerate
- ↓: Decelerate
- ←: Steer Left
- →: Steer Right
- No action

How does it look

Istanbul Park Grand Prix

Ultimate Racing 2d on Steam

Feature Spaces

- The car's velocity $[0, V_{max}] \xrightarrow{Normalized} [0, 1]$
- Heading angle relative to the track $[-180, 180] \xrightarrow{Normalized} [-1, 1]$
- Proximity to the track's edges $[0, D_{max}] \xrightarrow{Normalized} [0, 1]$

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Reward Function

- Speed Reward: +0.01 iff progression is made.
- Contact with the track boundary -1.0 penalty.*
- Every second -0.01
- Crossing the finish line +1.0 reward.*

*(Game Terminated)

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