

Michigan Liar's Dice

Alex Turner
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Liar's Dice

- Dice Game for two or more players
- Other Names: Dudo, Cachito, Perudo or Dadinho
- Each player has a set of dice
 - All players roll their dice once

Liar's Dice

- Players can bid on the number of pushed and concealed dice
 - Players can also push with their bids to provide evidence of their bid
- Challenge other player's bids when they believe the current bid exceeds the number of dice
- Probability can augment reasoning behind bids and challenges

Soar

- Michigan Liar's Dice uses Soar for AI
- Performs extremely well against humans
 - Challenging
 - Fast

Showcase for Soar

- Liar's Dice is a showcase for Soar
 - Complex Environment
 - Large unknown world state (8 players: 35 unknown dice)
 - Agent influences decisions of other agents
 - Pushing & Bids
 - Multiple agents running in the same game
 - Including human(s)
 - Humans understand the challenge of Liar's Dice
 - Soar performs extremely well in this environment

Michigan Liar's Dice

- Created in 2011
- Released by University of Michigan in 2012
 - Free!
- At the time
 - Fast
 - Challenging
 - Performed well



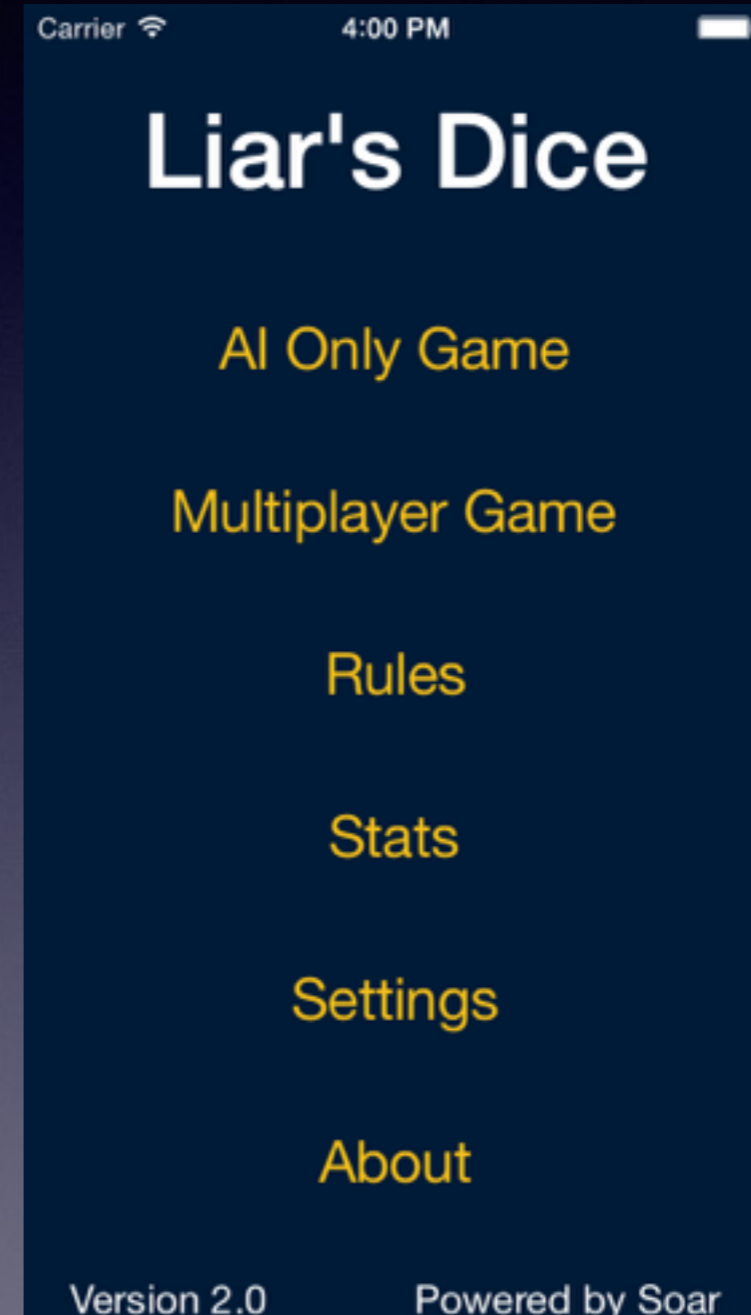
Current Version

- Soar
 - AI is a little predictable after enough play throughs
- App
 - Interface doesn't fit the aesthetic of iOS 7+
 - Broken on iOS 7/8
 - No iPad Interface



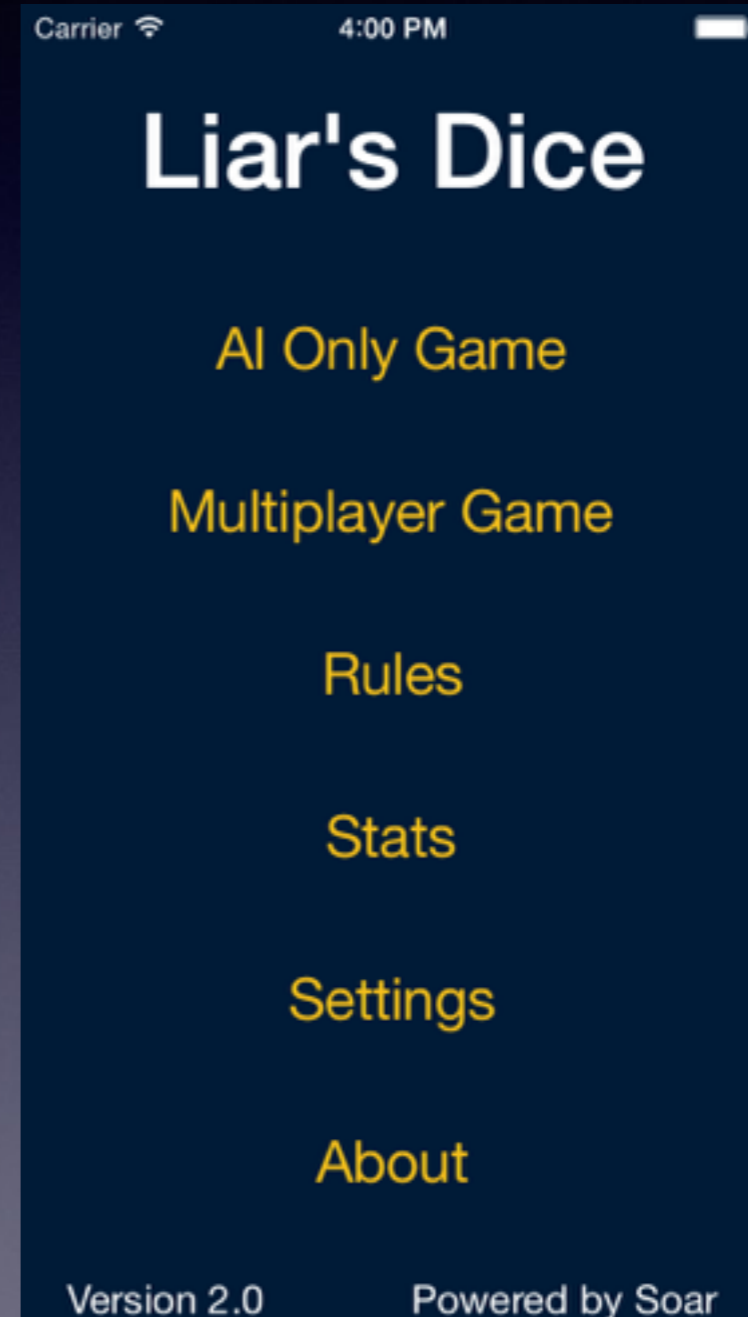
New Version

- Soar
 - Improved AI to be less predictable
 - Makes it more challenging on harder difficulties



New Version

- App
 - Cleaner
 - Easier to understand
 - Easier to use
 - More Accessible
 - iPad interface
 - More players supported
 - Up to 8
 - Multiplayer via Game Center



Multiplayer

- Turn Based
 - Player completes one turn, hands it off to another player
 - Can then go and do something else while the game is going on
- Up to 8 players
 - Max: 6 AIs, 2 Humans
 - Max: 8 Humans
- Requires Internet Connection and Game Center Account
 - Game Center Account: Apple ID

Demo

Availability

- iOS 6 and before
 - Not supported
 - Can still download and use previous version
- iOS 7/8
 - Later this summer

Nuggets and Coal

- Nuggets
 - Good showcase of Soar
 - Fast
 - Performs well in complex environment
 - Fun and challenging game
 - Able to play against your friends with Soar
 - Clean and easy to use interface
 - Supports iPhones and iPads
- Coal
 - Multiplayer requires internet connection
 - Only 8 players at most
 - iOS 7+ only

Liar's Dice



<https://itunes.apple.com/us/app/michigan-liars-dice/id562997948?mt=8>