AI

+ matrixes: Array<Array<Array<Array<double>>>>
+ gameState: GameState
- hotOnReceive: Double
- stalenessOnObservation: Double
- stalenessOnNegativeAff: Double
- riskyPlay: Double
- lessRiskyPlay: Double
- playWeight: Double
- discardWeight: Double
- discardRisk: Double
- tokenWeight: Double
- validityVector: Double[]
- validMatrix: Double[] []
- discardMatrix: Double [] []
- playersInGame: Integer
- cardsInHand: Integer
- master: Boolean
+ slaves: AI[]
- slaveCards: String[]
- myCPS: ConditionalProbabilityTable
- myCards: ConditionalProbabilityTable[]
- suits: String[]
- ranks: String[]
- myNumber: Integer

+ AI()
+ findBestPlay(): Integer
+ findBestDiscard(): Integer
+ findBestHint(): Pair<Hint, Integer>
+ findBestMove(): HashMap<String, String>
- findHints(String[] observedCards, ConditionalProbabilityTable[] otherCPTs): LinkedList<Hint>
+ modelChanged(): void
+ devourStack(LinkedState<Map> eventStack): void
+ updateInternal(HashMap<String, String> Event, Integer Player, Integer Position): void
- receiveHint(Boolean[] cards, String card): void
- observeHint(Boolean[] cards, String card, Integer player): void
- receiveNewCard(Integer Position): void
- observeNewCard(String rank, String suit): void
- updateEVs(): void
+ initialObservations(): void
- observePlay(String rank, String suit): void

ConditionalProbabilityTable

+ cardLeft: Integer
+ sumOfSquares: float
+ CPS: Integer[] []
+ CPT: Double[] []
+ playEV: Double
- discardEV; Double
+ staleness: Double
+ hot: Double

+ indexToSuit(Integer index): String
+ caalSumOfSquares(): void
+ calcCPT(): void
+ expectedValueDiscard(Double[][] discardMatrix, Integer Tokens):void
+ expectedValuePlay(Double[][] validMatrix): void
- cardToIndex(String card): int
+ observeDraw(String rank, String suit): void
+ observeHint(String card): void
+ receiveHint(String card): void
+ toString(): String
- sumOfVals(): float
- CPSsum(): Integer

CPS

+ myCPS: int[][]
+ possibleCards: int
+ myCPT: double[][]
+ myGameType: String
+ myEV: double

+ receivePositiveHint(String hint): void
+ receiveNegativeHint(String hint): void
+ calculateCPT(): void
+ indexToSuit(Integer index): String
+ observeDrawCPS(Card card): void
+ clone(): CPS
- hintToIndex(String hint): Pair<String, Integer>
+ toString(): String