Gomoku UMLs

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| Game |
| mode  *singleplayer/multiplayer*  length  *the length of one side of the gameboard*  win\_con  *how many pieces in a row are needed to win*  player1  *the first player*  player2  *the second player*  active  *whose turn it is*  speed  *how fast learning occurs (if applicable)*  learning  *whether the game is currently learning or not* |
| \_\_init\_\_()  *initialization*  startup()  *prompt user for options*  play\_game()  *runs a match*  check\_winners()  *checks to see who has won*  count\_row()  *counts all the pieces of a type in a sub-row/column*  pos\_in\_row()  *returns a list of all positions in a sub-row*  pos\_in\_dia()  *returns a list of all positions in a sub-diagonal*  pos\_in\_col()  *returns a list of all positions in a sub-column*  draw\_board()  *draws the game-board*  learn()  *begins the learning routine*  mock\_round()  *controller of a mock game*  mock\_game()  *mock counterpart of play\_game(), plays a mock game* |

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| Player |
| name  *the name of the player*  symbol  *the symbol of the player (X/O)* |
| \_\_init\_\_()  *initialization*  turn()  *taking a turn*  replace()  *placing a piece on the board* |

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| AI |
| co1  *intelligence co-efficient 1*  co2  *intelligence co-efficient 2*  co3  *intelligence co-efficient 3*  co4  *intelligence co-efficient 4*  co5  *intelligence co-efficient 5*  position\_type  *list of how many of each type of sub-row exists touching a position*  position\_points  *list of the total points of each position*  points\_tally  *list of the number of the points of each sub\_row* |
| \_\_init\_\_()  *initilization*  turn()  *the AI taking a turn*  count\_points()  *the AI thinking (considering each position)*  switch()  *the AI changing its intelligence with another instance of itself* |