# Skills Prior to Starting

* Basic knowledge of AI,
* Introductory knowledge of Python
* Decent knowledge of OOD methodologies

# Goals

* Improve Python skills by implementing OOD chess game
* Improve skills by writing tests for chess game
* Expand skills by adding an AI component to the chess game that learns by playing itself
* Expand skills further by changing AI learning mechanism and evaluating performance

# Plan

1. Research Python and Testing materials, frameworks and methodologies.
   1. <https://www.freecodecamp.org/news/simple-chess-ai-step-by-step-1d55a9266977/>
   2. <https://medium.com/applied-data-science/how-to-build-your-own-alphazero-ai-using-python-and-keras-7f664945c188>
   3. <https://buildmedia.readthedocs.org/media/pdf/python-chess/latest/python-chess.pdf>
   4. <https://impythonist.wordpress.com/2017/01/01/modeling-a-chessboard-and-mechanics-of-its-pieces-in-python/>
   5. <https://classroom.udacity.com/courses/cs271>
   6. <https://www.youtube.com/watch?v=ZDa-Z5JzLYM>
   7. <https://www.youtube.com/watch?v=SUt3wT43AeM>
   8. <https://www.youtube.com/watch?v=6tNS--WetLI>
2. Pseudo code basic OOD chess game
   1. Research for any applicable patterns
3. Outline test
4. Implement and test chess game
5. Extend chess game to have a CPU player that learns
6. Figure out how to launch and have two CPU’s play eachother and learn