Sorting Performance

The sorting performance is O(nlogn). If there is n numbers to be sorted into the AVL tree, it would require n recursive insertions. Since the insertion of a singular node is O(logn), and the traversal of the tree is O(n), with n insertions, the performance is nlogn + n = O(nlogn). The other methods such get_height, cur_node_height, and self.__balance are all O(1), so they do not add to the time complexity, so the sorting performance is still O(nlogn).

This sorting method only works for numbers because of the necessary greater than and less than principles of sorting the tree. Strings and such would not work. The sorting method was tested and used on positive integers, but floats would also work with the same performance.