AlphaGo Defeats Chinese Go Master

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- What is AlphaGO
  - AI program developed by Google DeepMind in London
  - Surround a larger total area of the board han the opponet
    - More complex than chess: innumerour more possibilities
- How does it Work
  - Monte Carlo tree search: finds moves based on knowledge previously learned by machine learnong (deep learning)
  - Based on playouts: select moves at random and assigns weights to the moves on nodes of treee
  1. Section: cjppsog cjold nodes hat let tree expand towards most promising moves
  2. Expansion: Unless game ends, create additional child nodes
  3. Simulation: play random playout from specific node
  4. Back propagation: use rsult to update information in node on current path
- How is it diffierent
  - Previous AI was Deep Blue- designed for chess
    - Deep Blue worked in more traditional manner -> consider all possible moves
  - Alpha Go aplies to neural network where evaluation heuristics are not hard coded by humnas but are learned through past Go matches and matches played against itself
  - Not even developer teamm is capable of pointing out next move
- Results
  - First tested AlphaGo against Lee Sedol, Korean
    - One of the bes in world
    - Beat him 4 games to 1
  - Second test Ke Jie, Chinese National go player
    - AG won first game
- Lessons/Applications
  - Can develop software that perform better than humans can
    - i.e self driving car, legal documents
  - Consider milesone towards creating human-level AO softwar

        - Creat machines with humanlike capabilities
- Possibility: AI takeover
    - AI becomes too smart and humans will be under their control
- What's next
    - Start prep for genral purpose intelligent machines
    - Companies: like Facebook and DeepZenGo are working on developing AI algorithms