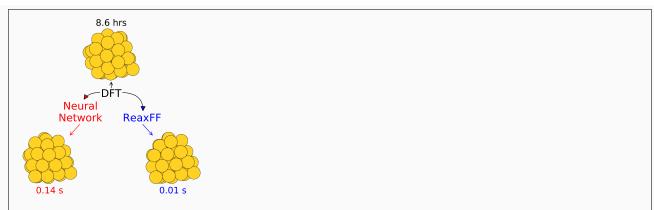
## Graphical Abstract

## January 18, 2016



Predicted minimum energy structures for 38 atom Au cluster from a total of 125 configurations for KS-DFT, Neural Networks, and ReaxFF. Calculation times are also shown for comparison.