Subject: Phase 1 - Tanna-Shah: Creating an Interpretable Chess Engine

Phase 1 Project Selection Status Report

Name: Kai Tanna-Shah
College: Churchill College
CRSID: kt507
Director of Studies: Dr John Fawcett
Please complete 1, 2 and 3 below.

1. Please write 100 words on your current project ideas:

   Chess engines are becoming increasingly more powerful, and have long been able to outperform the best humans in the world. As such they are used by many top players to improve their understanding of positions, however, less experienced players often have difficulty in interpreting why a chess engine is suggesting a certain move. My approach would involve fitting a more explainable evaluation model, with interpretable features of a position in order to provide explanations alongside sequences of moves it suggests. The fitted model will be used with a min-max algorithm to identify the best moves

2. Please list names of potential project supervisors, indicating any interactions you have had with them, for example: not contacted, awaiting reply, in discussion, agreed to supervise.

   David Khachaturov: agreed to supervise

3. Is there any chance that your project will involve any computing resources other than the Computing Service's MCS and software that is already installed there, for example: your own machine, machines in College, special peripherals, imported software packages, special hardware, network access, substantial extra disc space on the MCS. If so indicate below what, and what it is needed for.

   My personal laptop:

   - M1 MacBook Pro, 256GB solid state drive
   - I accept full responsibility for this machine and I have made contingency plans to protect myself against hardware and/or software failure.
   - All project related work will by synced to my Google Drive, as well as being held under git on GitHub

   Stockfish chess engine:

   - To be used as a "ground truth" evaluation of a position
   - To be used to train the interpretable model