### Team Details:

**Team #: S-17 – 25**

**Title:** Smart Chess Board: Digitally Augmented & AI Assisted Player Experience

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### Abstract:

Chess is predominantly a board game that requires strategy and keen decisions. It has advanced over the years from being played on an actual board to becoming digitized and played all across the world via the web. Through several different chess applications the game has evolved to such an extent where it has developed several new functionalities and game modes, which make the concept of chess itself unique and interesting. Some of the cons to this new development are the fact that people are no longer able to interact face to face. The lack of interaction diminishes the quality of the game. In order to rekindle the gameplay at a personal level, our team is designing a smart chess board, which takes the benefits of digitized chess and brings it to life on an actual physical board. We will implement a tutorial which will allow newcomers to learn the game not to mention challenge their skills with puzzles, which are fun and creative simultaneously. Other appealing functionalities that are included will be LED lighting, which showcases potential move positions of each chess piece. The project involves a microcontroller, chess engine, chess set and other smaller electronics to detect the incoming signal of a chess piece, when a user picks it up. From there, the chess algorithm will provide the user with possible predictive moves that they can attempt with the piece they picked up. The board will also show any erroneous moves performed by the player. Using few simple functionalities as described above, any player is able to learn and play chess.