

# Hybrid Chess Chatbot

## Overview

- Project Name: Hybrid Chess Chatbot
- Description: A web-based chatbot that allows users to play chess, chat with an AI assistant, get move explanations, hints, and reset the board.
- Technologies Used:
  - Python 3.10+
  - Streamlit for UI
  - python-chess for chess logic
  - svglib & reportlab for board rendering
- Key Features:
  - Play chess using UCI moves
  - AI responds with moves and explanations
  - Commands: 'help', 'reset', 'legal', 'hint'
  - Chat interaction integrated with gameplay
- Screenshots/Illustration: Include chessboard and chat interface

## Architecture & Workflow

- Architecture:
  - Streamlit Frontend: Text input, board display, chat history
  - Python Backend: Handles move validation, AI moves, and explanations
  - Chess Engine: Random moves or optional Stockfish integration
- Workflow:
  1. User enters a move or chat message
  2. Backend validates move
  3. Bot responds with move or chat message
  4. Board is updated and displayed
  5. Chat history updated
- Rendering:
  - SVG chessboard converted to PNG using svglib + reportlab
- Outcome:
  - Interactive hybrid chess bot with conversational AI assistance

- User-friendly interface for both playing and learning chess