- **Name :** Loan Rosseeuw

- **Name of your Level 1 : L1_IslamSouissi**

- **Paper title :** **Factors Involved in Artificial Intelligence-based Automated HTML Code Generation Tool**

- **Source :** scholars.google.com

- **Keywords specific to the paper :** Code generation/AI

- Summary : This paper explores the realm of automated code generation, focusing on its significance in simplifying programming tasks, particularly for web development. Leveraging advancements in Artificial Intelligence (AI) and Machine Learning (ML), the proposed system aims to convert hand-drawn design prototypes into HTML code efficiently. Through a modular architecture, incorporating image processing, data preprocessing, and ML techniques, the system demonstrates robustness in generating accurate HTML structures. Key algorithms such as Bilingual Evaluation Understudy Score and image captioning play pivotal roles in ensuring output fidelity. Despite challenges like handwriting recognition variability, the system showcases promising results, highlighting the transformative potential of automation in web development workflows.

AI Model Used : The paper utilizes various AI models and techniques, including image processing, natural language processing (NLP), computer vision (CV), and machine learning (ML). Specific algorithms mentioned include Bilingual Evaluation Understudy Score (BLEU) and image captioning.

Introduction of AI Models : The paper introduces these AI models in the context of automatic code generation, emphasizing their role in simplifying programming tasks. It highlights the significance of AI and ML advancements in recognizing and converting user inputs, particularly hand-drawn design prototypes, into HTML code efficiently.

Contribution to Proposed Idea : The AI models contribute to the idea proposed by the paper by facilitating the translation of hand-drawn design prototypes into HTML code. Through modules such as Image Processing, Data Preprocessing, and Machine Learning, the system leverages AI technologies to overcome challenges such as handwriting recognition variability. Specific algorithms like BLEU scores and image captioning play crucial roles in evaluating output accuracy and extracting shapes and text from images, respectively. Overall, the integration of AI models enables the proposed system to streamline the web development process and enhance productivity.

In summary, the paper demonstrates the potential of AI and ML technologies in automating code generation tasks, particularly in the context of web development. Through the integration of various AI models and algorithms, the proposed system offers promising results, paving the way for further advancements in automatic programming.