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|  | **Title :** **Project Registration & Progress Review** | | **FF No. 180** |  |
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| **Department:** Computer Engineering | | **Academic Year:** 2025-26 | | | |
| **Semester :** SEM-I | | **Group No. : SY F-15** | | | |
| **Project Title: EvoAI : Self-Evolving Generative AI Ecosystem** | | | | | |
| **Project Area: Artificial Intelligence, Multi-Agent Systems, Machine Learning** | | | | | |
| **Group Members Details:** | | | | | |

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| Project approved / Not approved  **Guide Project Coordinator Head of Department** |

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| **Project Synopsis: -** |  |  |  |  |  |
| **Title: EvoAI : Self-Evolving Generative AI Ecosystem**  **Introduction:**  Most AI models today are impressive at solving problem. The only problem is they solve it in their first try. They can’t learn from their mistakes or get better overtime unless a human steps in. Once they are trained, they are stuck in the same state unless more data is fed to them to increase their accuracy. This limitation holds back the true capability of AI  The solution: **EvoAI.**  EvoAI, taking inspiration from the **Darwin Godel Machine** concept sets out itself from other AI models where it will learn from its errors, adapt and improve its own performance. An AI which not only codes, but also teaches itself to get better at it all by itself.  **Objective:**  The core objective of EvoAI is to create a self sufficient AI which can:   * Solve algorithmic problems. * Examine its own code, logic flaws and inefficiencies. * Learn from issues and improve further performance. * Continuously evolve without/very less human interference   EvoAI will function in a feedback loop—constantly reviewing its successes and failures, learning from them, and getting better with each iteration.  **Hardware and Software Requirements**  **Hardware**  A mid-to-high-end personal computer or laptop with:   * Minimum 16 GB RAM * RTX GPU * SSD storage for fast training and testing   **Software**   * **Programming Language:** Python 3.x * **Libraries/Frameworks:**   + Transformers (for language models)   + OpenAI API or HuggingFace   + PyTorch or TensorFlow   + Git (for version control)   + Streamlit or Flask (for building UI)   + SQLite or JSON (for storing performance logs)   **Analysis of this project**  Unlike traditional AI that just churns out answers, EvoAI is about **progress**. It doesn't stop at solving problems—it takes time to reflect, adapt, and improve. This concept is based on academic ideas like the Darwin Gödel Machine and research into recursive self-improvement.  While some advanced systems like Sakana AI have shown promise in this space, EvoAI takes a practical approach that fits an undergraduate-level project. Key goals include:   * Developing a feedback loop for the AI to evolve. * Visualizing how it improves over time. * Keeping logs of errors and learning moments. * Providing a simple UI to track its growth.   **Limitations of the proposed system**  The starting version of EvoAI would come with some constraints like   * Limited Scope * Narrow Training Set * Early Stage   **Conclusion**  EvoAI is a step toward building truly autonomous AI that doesn’t just generate code—it evolves. By learning from its own mistakes and growing independently, it challenges the current limits of what AI coders can do. | | | | |  |

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| Group No. |  | | |
| Activity | Review Schedule | Progress Review Report submitted | Signature of Guide |
| Review 1 | Mid Sem. Semester | Yes / No |  |
| Review 2 | End of Semester | Yes / No |  |

Format of Progress Review Report:

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| **Review No.: 1 Group No.: Date:** |
| **Progress Review Report** |
| **Signature of Guide:** |

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| **Review No.: 2 Group No.: Date:** |
| **Progress Review Report** |
| **Signature of Guide:** |