GhibliCraft – Where You Meet Ghibli World

➢ *Introduction*

This project brings Studio Ghibli's iconic art style to life using AI. It offers two main functionalities: converting user-provided images into Ghibli-style visuals and generating Ghibli-inspired images from textual descriptions. Powered by advanced image generation APIs, the tool ensures artistic consistency and creativity. Whether uploading a photo or imagining a scene, users can experience the charm of Ghibli through AI.

➢ *Technologies Used*

Backend Frameworks:

- Spring Boot: For building the backend and RESTful APIs.
- Spring MVC: For the Model-View-Controller architecture.
- Spring Web: For handling HTTP requests and servers.
- Lombok: To reduce boiler plate code for Java.

Programming Languages:

- Java: Backend Development
- JavaScript: Frontend Scripting

Frontend:

- React.js: For building user-interface and managing frontend logic.
- Routing: React Router for private and protected routes.

API Service:

- StabilityAI API: For Ghibli style image generation.

Version Control System:

- Git/Github: For version control and code repository management.

API Testing Tools:

- Postman: For testing and validating APIs.

➢ *Key Features:*

- **Image to Ghibli Conversion:** Upload any image and transform it into a Ghibli-style artwork using AI.
- **Text to Ghibli Image Generation:**
  Input a text description (e.g., "a boy riding a bicycle under cherry blossoms") to generate a Ghibli-inspired scene.
- **API-Powered Rendering**
  Seamless integration with AI image generation APIs for fast and high-quality outputs.
- **Downloadable Results**
  Easily download the generated Ghibli-style images for personal use or sharing.
- **Responsive UI**
  Clean and intuitive interface designed for smooth interaction across devices.

➢ *Project Structure:*

Dependencies Used:

- spring-boot-starter-web
- spring-boot-devtools
- spring-cloud-starter-openfeign
- Lombok

- ***Installation Steps:***

1. Open the terminal and clone the repository using following command.

```
git clone https://github.com/HitarthPatel123/GhibliCraft.git
```

2. Navigate to GhibliCraft-> src -> Frontend. Open 'Frontend' directory using VS Code or other IDE.

3. Install all the react modules required and run the react frontend using following command:

```
npm run dev
```

4. Navigate to GhibliCraft-> src -> Backend. Open 'Backend' directory using Intellij IDEA or other IDE.

5. Update all maven dependencies. Configure 'application.properties'.

6. Run the backend. It will run on port- 8080.

- *Future Enhancement:*

  Improvements could be made in the quality of the image generated. Further, currently only .png image file is supported. But extension can be made for other image formats too. More number of features can be installed resulting in enhanced user – experience.