PROJECT B.A.T.

A Google Earth Pro to Minecraft Blueprint Automation Tool

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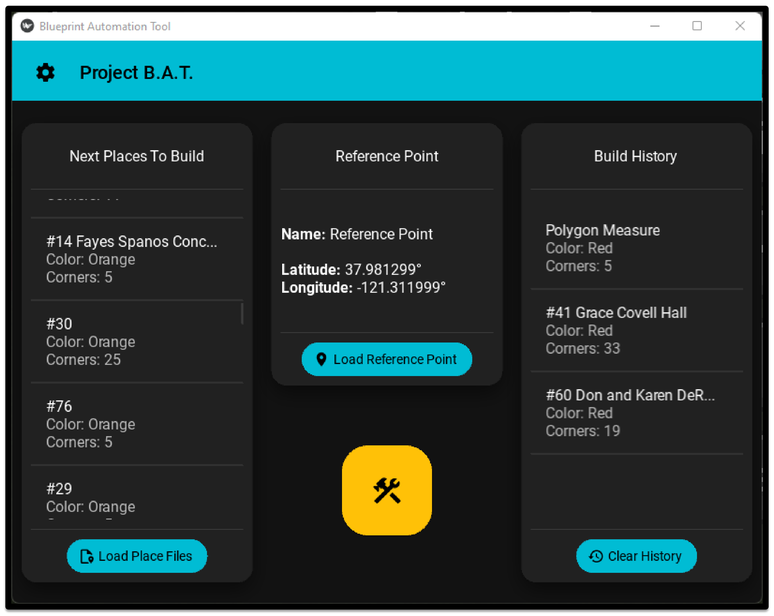
Background

As a result of the creative possibilities that exist in the popular game Minecraft, players have created different projects to challenge their skills. A popular challenge that players participate in is the recreation of places that exist in the real world to scale. In the past, groups have taken on projects such as recreating monuments, theme parks, or entire cities.

The most tedious part of this challenge is the planning phase, where players must calculate measurements for the project to create blueprints of the places they are trying to build. This process can become both time-consuming and challenging to do, leaving room for players to easily become burnt out or frustrated with mistakes. Project B.A.T., or Blueprint Automation Tool, attempts to solve this problem by taking layouts users define in Google Earth Pro files and subsequently builds them to scale in Minecraft through automation.



Project B.A.T. Main User Interface

Conclusion

Summary

Project B.A.T. is an application that lets users take saved layout files from Google Earth Pro and then builds them to scale in Minecraft. This allows users to save time and effort from calculating all the measurements by hand so that they can focus on the more creative aspects of building. Users can also adjust the building blocks, building height, and scale of their blueprints for greater flexibility.

What I've Learned

Through this project, I've learned many different things, including more technical knowledge of how automation libraries work and the Win32 API for simulating keyboard and window interactions. I've also learned more about continuous development and deployment methods. For project organization, I've learned more tools that provide development tracking.

Implementation

Game Automation

Automating the placing of blueprints in-game is the project's primary feature. Using custom automation modules, the project takes places that have been loaded and types commands into the game's console to create the outlines in the currently loaded Minecraft world.

The project also features text verification, ensuring that nothing is unintentionally sent in to chat to prevent unwanted side effects, including shapes being drawn incorrectly.

Configuration

Project B.A.T. features settings that affect how the automation builds blueprints. Settings are saved when the program closes, allowing users to make blueprints at different times without needing to adjust settings whenever the project is loaded. Users can adjust the following properties of the builds the automation creates:

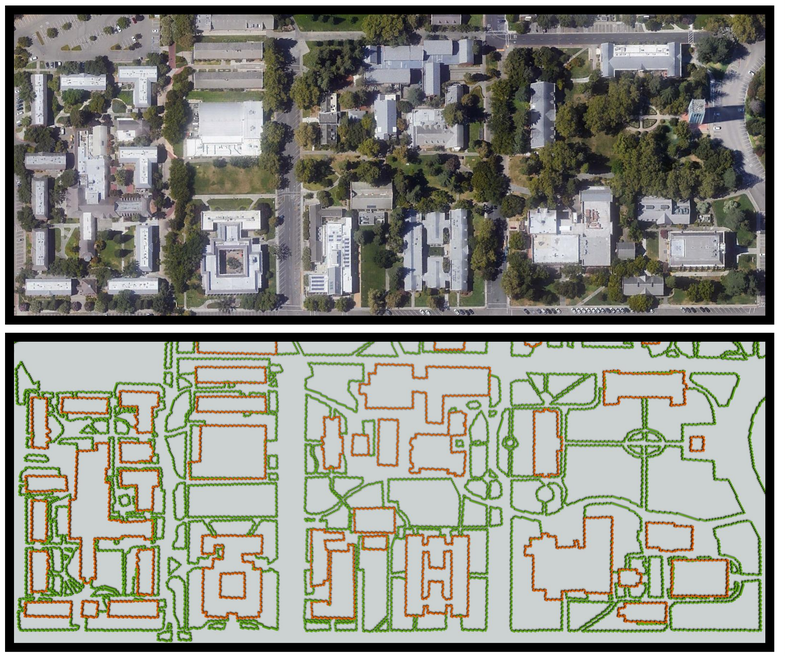
- Block To Build With
- Scale Of The Build
- Height For Automation To Build At

Players can build with any colored block as well as scale their builds from 50% to 200% of their actual size.

User Interface

The program's user interface was designed with plug-and-play in mind, with only necessary actions being located on the main application screen. On the main screen, the user uploads their reference point and the files they want to be built. They then press the yellow button to start building. After building, a history is provided.

Settings are configured in a menu located in the top-left. In this menu, users can adjust all the behavior configurations, as well as whether to have a light or dark background for the user interface.



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Compared To Blueprint Built By Project B.A.T.