# DevOps Toolchain Documentation

The Oregon Trail with Python(s) – Red Team

# Introduction

The purpose of our project is to recreate the popular text-based adventure decision game from the ‘70s “The Oregon Trail” using python. This will not be a 1:1 recreation but simply inspired by it. This version will have python puns included in gameplay to reference the language the game is built with.

This is a linear path game where you try to make it to the next checkpoint before running out of food. Each decision you make only affects how much time it takes to get to the next checkpoint or your food rations. If you take too long, you’ll run out of food and die. There are also special scenarios where you’ll get more food, lose food, or randomly die. It all is related to the food countdown or randomized death.

In order to collaborate, build, test, deploy, and run this project, there are many tools that we will need. This document will discuss the tools needed to complete this project successfully using a waterfall development process.

# DevOps Toolchain

The below figure is the DevOps toolchain we plan to use for The Oregon Trail with Python(s). The approach that we are using for development includes several steps with tools used in each step. First, for collaboration, we need Trello for application lifecycle management, Discord for communication and knowledge sharing, zoom for team meetings, and google drive, to share documents and request feedback. Next, in the build step, we’ll need GitHub for version control, Visual Studio Code to write code, TKinter to manage the GUI, and Stable Diffusion for generating images. Then, in the test step, we’ll use Pytest to manage and automate testing. For the deployment step, we will use GitHub to manage pull requests and code reviews. Finally, for the run step, we will use Python Anywhere to run our project in the cloud. The below figure shows the complete toolchain for reference.

