**Overview:** Our team desires to find sleek, clean solutions to the current lack of drawn houses. We want to develop reusable functions that can even be used to make other structures, such as office buildings, or even forests.

This solution employs the turtle library in python to draw a house with doors, windows, garage doors, and even trees. A variety of subroutines were defined, allowing for editing by the user.

**Background:** We will publish an easily reproducible house-image generation. We could also draw the house by hand, but that is much less reliable/reproducible.

**Goals:** Create a simple house using the turtle library

**Non-goals:** Drawing any other structures

**Future goals:** Find ways to adapt this drawing to other structures

**Detailed design:** User needs to understand very little about python beyond running code. If they wish to edit the drawing, they need functions which are easy to understand. This is highly secure, private code.

**Third Party dependencies:** python, turtle library.

**Work estimate:** 3 hrs

**Alternative approaches:** We could have used R turtle library or other drawing software and drew by hand

**Related work:** DALL-E

**Designation of work:**

Door and garage door functions – Thomas

Window functions – Joe

Tree and cloud function – Ariana

Roof and base – Angelika

Make scene – Joe, Thomas, Ariana, Angelika

Video – Ariana and Angelika