



# Case Study

## Category

AI image generation,  
Developing AI literacy

## Instructor

[Jennifer Birkeland](#),  
Assistant Professor

## Department

Landscape Architecture  
College of Agriculture and  
Life Sciences

## Course

LARCH 5060:  
The Future of Image:  
Tools in Representation

## Discipline

Landscape Architecture

## Course-level

Graduate

## Course size

20 students

## Implemented

Spring 2024

Scan the QR code for an  
unabridged version of this  
case study



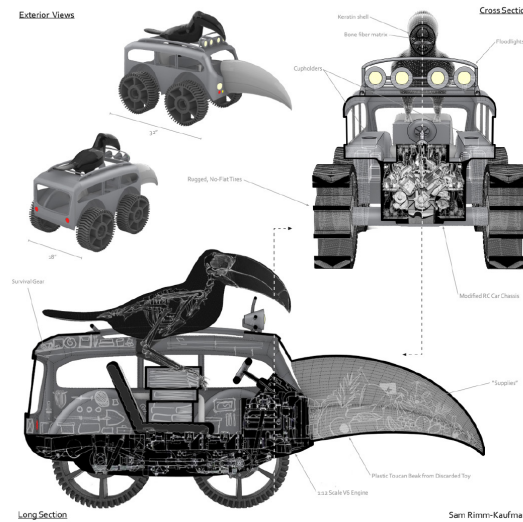
# Exploring AI Image Generation for Landscape Architecture Designs



Students used AI image generators to refine images through multiple assignments while discussing the efficacy of AI in creating these images.

## Brief Summary

Students used a variety of prompts with AI image generators to create a large volume of sample images to bring to class. In class discussions, students looked critically at the limitations of AI based on the images created from their prompts. The discussions covered such topics as biases, ownership, and the source libraries for the AI tools. The students then chose one of their prompts and an associated image to refine into a 3D model crafted by the student.



A model by Sam Rimm-Kaufman,  
for an assignment

## Learning Outcomes



AI Literacy and  
Proficiency



Problem-based  
Learning



Visual  
Communication



Refining  
AI-generated  
Images



## Context

In the field of landscape architecture, designers rely on images and 3D models to communicate with clients. AI image generation technology will almost certainly be part of future work in making images from design ideas. The instructor decided to dive in and test how well these new tools work alongside her students. They went back and forth between using AI tools and other methods of creating drawings and models, exploring their potential uses and limitations.

## Implementation

Using AI image generators such as DALL-E2 and MidJourney, students were tasked with bringing in 80 images of a “weird thing,” focusing on how the manipulation of their prompt could alter the image. This creation was followed by a class discussion: Did the prompts match their expectations? What were the shortcomings? What biases existed within the AI databases?

Following this exercise, students chose one of their prompts and evaluated the image outputs of that prompt based on criteria discussed in class. After a deeper evaluation of the images, they chose one of these creations and turned it into a 3D model to further meet the course’s core learning objectives.

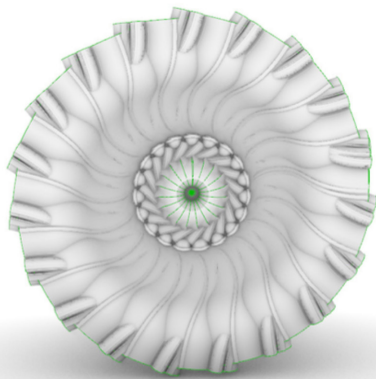


AI images from the tool Midjourney

## Reflection and Future Directions

“It’s helping my less creative students be more creative or think outside the box a little bit more. So that’s where I definitely appreciate it.” said Jennifer Birkeland, instructor

At this time, the instructor believes that the incorporation of more AI animation earlier may be beneficial. Building their confidence in using the methods over time can help ease students into using these tools.



A model by Cole Warner, for an assignment

“It’s helping my less creative students be more creative or think outside the box a little bit more.” Jennifer Birkeland

## How to Implement This in Your Class

Some key tips or items to keep in mind when working with AI image generation are:

- Try to understand the models/libraries/sources that AI uses. Recognizing the limitations, biases, and information that the AI uses when creating the images is crucial. Use this as a point of discussion with your students to help them understand AI more and be more critical of its use.
- Start small and build. Focus on one assignment, activity, or discussion, where you can have the students utilize AI.
- Create a safe space for exploration and discussion within the class. Give the students a simple prompt to start with for the generator and then encourage the students to bring in a multitude of results. Giving students the ability to explore the variances that can exist with a simple prompt and manipulating it can establish a great foundation for a discussion. Make sure to give time and space for students to reflect on their use of AI image generation based on their experiences in class to help them further their understanding.