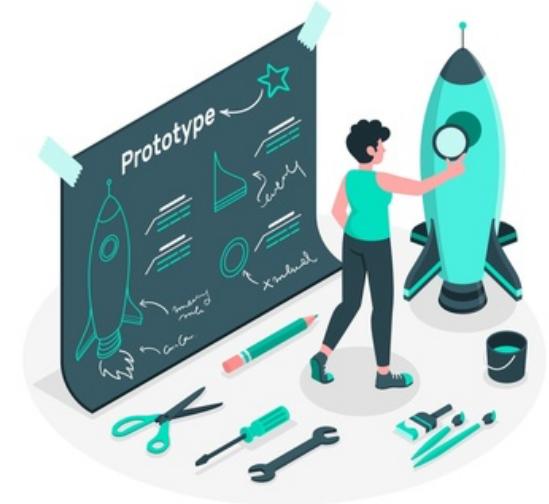


# Lecture 17: Review Peer Comments on Your Prototype



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# Prototype Recap

## □ What is a prototype?



Final Goal:  
A house

Prototype: a small type of work to demonstrate the feasibility of your proposed approach to the final goal.

**Key question: why should I believe in your proposed technical work?**



# Example 1: MercuryMesh

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## Prototyping

Our project prototype will consist of two main components:

First, we have our physical prototypes. We are constructing four open source, RC cars. These cars will provide us extensible access to the software and hardware that drives them. We will attach 2D Lidar sensors to each vehicle to generate proximity maps of the area around the car. Each car will also be equipped with local positioning system (LPS) modules to automatically range and determine physical location. Our prototype will primarily be a demonstration of generating and collecting information from each vehicle as they are in operation. We will show that they can continuously determine their location while generating proximity data.

Secondly, we have our simulation prototypes. We are using Unreal Engine and AirSim, a autonomous vehicle library from Microsoft, to create a realistic simulation of self-driving cars. This simulation will demonstrate a working model of our proposed technology. We will use the pre-built autonomous driving libraries so we aren't concerned with developing new methods of driving vehicles.

Our prototype will demonstrate that sharing information between vehicles allows them to operate more reliably and more safely.

For more updates on our project, view the prototype tag in the [project blog](#).

<https://mercurymesh.dev/>

# Example 2: Smart Chess

## Smart Chess

HOME ABOUT TEAM CONTACT

CHESS



Abstract



Time table



Project Challenges



Prototype

### Prototype Plans

Prototyping is an important part of any ambitious project. As such, we have taken on an ambitious approach to our project. The key functionality to our project is the ability of our board to recommend **the best** next move. As such, we plan to have a functioning application that will read in *Chess Algebraic Notation*, ([more info available here](#)), and returns the next best move. This type of proof of concept is important because it is at the heart of our core functionality of our project.

If you love chess and would like to contribute to our project please reach out to Ye Zhou.

<https://jason-zavala.github.io/smarchess/>



# Example 3: UVector

The Team

Abstract

Challenges

Budget

Timetable

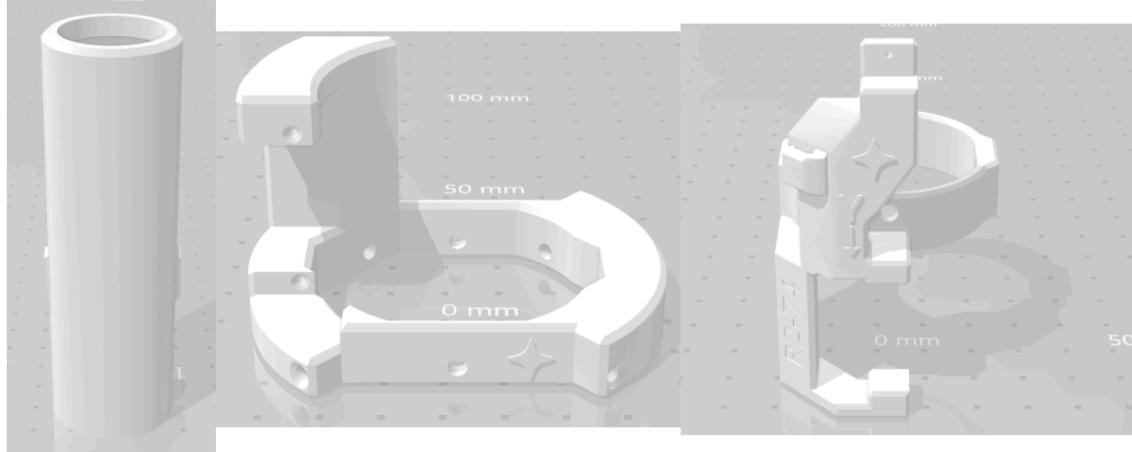
Collaboration Plan

Want to Join?

Prototype

## Prototype

For our prototype we will have 3 parts 3D printed that will create a 2 axis gimbal. These parts will hold the engine and 2 motors and be inserted into a 21mm rocket body. The motors will be connected to a raspberry pi that will be programmed to show that when the rocket body is tilted off axis the motors will move to correct the offset.



<https://vectoru.space/prototype/>

# Peer Evaluation for Prototype

- Each team should receive other's comment
- <https://github.com/tsung-wei-huang/cs3992/issues>

The screenshot shows a GitHub issue titled "Holofan #7" opened by alexCharters on Feb 17, with 22 comments. Two comments are displayed:

**mfateh93 commented 6 days ago**

Team 8 (Salwa, Joshua, Todd, Mohammed):  
-Is this prototype related to the project?  
Yes. You did an amazing job stating what you will be working on and how the components are interacting together. I know you have displayed a state diagram, but it would be nice to see a description on what will be presented for the prototype (i.e. what can it do by that time)  
  
-Is the prototype convincing us to buy?  
Yes and no. It is a good product, might be a bit expensive down the road, but waiting on the prototype to make a commitment.

**ScotthewUT commented 6 days ago**

*VectorU comment:*  
**Is the prototype related to the project?**  
Yes, the website has very solid information about the goals of the prototype and how it relates to the project. It's clear what you want to achieve. If anything, it might be overly ambitious for the time remaining.  
  
**Is the prototype convincing for us to invest?**  
Yes! If the eye tracking works reasonably well for an early prototype, that would be a great head start.

# Why Peer Evaluation is Important?

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- Prototype is built to demonstrate to others**
- You need to demonstrate a prototype when you**
  - Launch a new project in a company
  - Launch a start-up
  - Launch a research project
  - ...
- You need to let others know you can do it**
  - OK, now I trust your technical capability
  - OK, now I know your idea is realistic

# Project Prototype Discussion

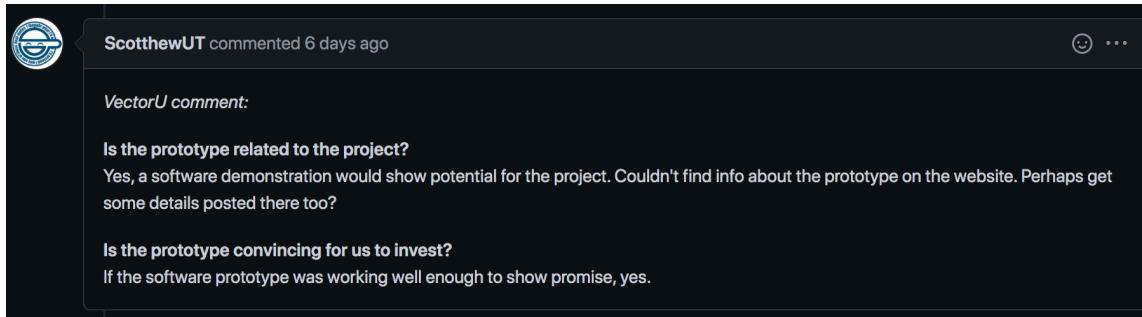
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- We have opened 10 breakout rooms**
  - Zoom: <https://utah.zoom.us/j/2468214418>
  - 1-9 are assigned for each team
  - Thesis track students are in room 10
- Each group works together to do the following:**
  - Review others' comments on your prototype at your project issue post: <https://github.com/tsung-wei-huang/cs3992/issues>
  - Discuss two items:
    - Do people correctly understand what you plan to do?
    - What do you plan to improve based on these comments?
- We will come back to have each team to speak**

# To Get You Off the Ground

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- ❑ Step #1: Visit the your project post
  - ❑ <https://github.com/tsung-wei-huang/cs3992/issues>
- ❑ Step #2: Review comments on your prototype



- ❑ Step #3: Discuss the two items in the worksheet
  - ❑ <https://docs.google.com/spreadsheets/d/1JfWZkEyoXdVLtHkiwOqk24G7WVhLWMCP113cSe9fgsQ/edit#gid=771236172>
  - ❑ Check in your attendance by marking your name **in bold**
- ❑ Step #4: Select one person to present