

# Proposal

How much do you trust your friend, *really*? Can you two work together under pressure? Can they keep up?

Inspired by co-op games that bring out both the high-fives and the banter, **THE T.R.U.S.T. GAME** hopes to bring that intimate co-op experience to virtual reality with communication-based puzzles and minigames.

# Method

The Unity game engine, combined with Microsoft's Mixed Reality Toolkit (MRTK 3), provided the framework for creating a 3D environment, scripting game behavior, and integrating it with the Oculus Quest 2 headset controllers.

Unity's ProBuilder package offered easy-to-use tools for modeling the level and its assets within the Unity Editor, preventing the need for learning and using separate 3D modeling software such as Blender.

Photon Unity Networking 2 (PUN 2) package suited the task. was used for connecting players across a network and synchronizing gameplay and objects between them.



CSE 493V  
VR SYSTEMS

# THE T.R.U.S.T. GAME

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## Teamwork and Rapport Under Stress Training



## The Party-Popping Puzzle

You and your partner are tasked with solving a little 3 by 5 jigsaw puzzle; the faster the better. However, the pieces are split amongst you and your partner, and your pieces are invisible to you but not your significant other. Communicate and plan how to place your pieces and complete the puzzle before the time runs out. How well can the two of you coordinate?

## Related Work

- Keep Talking and Nobody Explodes
  - A game where one player is given a bomb and the other a defusal manual, and they must communicate across the different perspectives to defuse the threat and finish the job. Communication based on separate perspectives is a perfect idea to bring to VR, where players are given separate headsets.
- Portal 2
- Overcooked

## The Heinous Hoops

Score as many hoops as you can. The catch - once again, your supply of basketballs are invisible to you, but visible to your partner. Communicate to help your partner score hoops while focusing on your own. Remember - this is a competition.

## Results

Developing such a game is a hefty task - the theme of trust and deception lends itself to so many possible game mechanics. In the future, I hope to continue development of **THE T.R.U.S.T. GAME** in the future.