

# NYIT Undergraduate Research and Entrepreneurship Program Mini Grant Proposal

**Students:**

Student A (studenta@nyit.edu), Department of Computer Sciences, CoECS, NYIT  
Student B (studentb@nyit.edu), Department of Electrical and Computer Engineering, CoECS, NYIT

**Faculty Advisor:** Dr. X, Department of Electrical and Computer Engineering, CoECS, NYIT

**Project period:** Oct. 15, 2022 - May 20, 2023

## Objective

We intend to create an optimized virtual reality (VR) environment to mitigate motion sickness (VR sickness). The team will conduct literature review to understand the causes of motion sickness and develop and experiment a 3D VR environment in Unity for this purpose. The VR environment will be utilizing the Virtusphere as a peripheral for user input in this application.

## Timeline and Deliverables

### First Semester

**Weeks 1-3:** Literature review

- One 30 minutes weekly meeting to present project progress.
- One deck of 4-8 slides, which you will use as your status report.
- A short summary of the week's activity be submitted to the mentor.

**Weeks 4-8:** VR environment development

- Software for VR environment development.
- One midterm report, presenting your results and directions.
- One midterm presentation.

**Weeks 9-14:** Testing and recalibration

- VR environment will be tested using the Virtusphere.
- Testing report and recalibration memo.

**End of the first Semester:**

- One midterm report, presenting results and directions.
- Research plan for the second semester.
- Any software developed as part of the project.

**Second Semester**

**Weeks 1-6:** Human subject study

- Continue calibration and testing for human subject study.
- Human subject study.

**Weeks 7-14:** Results analysis and Reporting

- Results analysis
- Writing report.
- Preparing for publication.

**End of the second Semester:**

- One final report, presenting results and directions.
- One final presentation (poster and oral) during make-up week.
- Any software developed as part of the project.

**Budget:** We request the mini-grant to fund travel between the Manhattan and OW Campuses throughout the semester for the team members to compile and test our VR environment on the Virtusphere in OW campus.

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Team member 1, Signature

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Date

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Team member 2, Signature

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Date

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Faculty Advisor, Signature

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Date