

**GCI Spring Showcase  
May 14, 2021**
**1:00 - 1:30 p.m. Student Q&A Session I**

| <b>Teams</b>   | <b>Room</b> |
|--|-------------|
| Solar Desalination Using a Fresnel Lens  | 2           |
| Reforming the Electoral College  | 4           |
| Why Causal Correlations are Applicable to Quantum Mechanics  | 6           |
| COVID-19 and Obesity: The Relationship Between Two Pandemics   | 7           |
| AI Chatbots In Therapy for Depression  | 8           |
| Greenhouse Gas Capture by Education  | 9           |
| Curing Alzheimer's: Use of microbubbles and ultrasound to increase blood brain barrier permeability for drug delivery  | 10          |
| Human Immunodeficiency Virus: Eradicating the Stigma   | 12          |
| The H.E.R.O. Program: Creating a Generation of Safe Thinkers   | 15          |
| Sustainability in Ubiquitous Computing   | 17          |
| An Intuitive Application for COVID-19 Education and Contact Tracing  | 18          |
| Developing a Classification Algorithm for Pedestrians and Street Signs   | 19          |
| Varying Dye Color and Nanoparticle Coating in Dye-Sensitized Solar Cells for the Highest Efficiency                    | 20          |
| Development of an Artificial Implantable Nanoparticle Carrying-Defibrillator Device to Treat Forms of Heart Arrhythmia | 21          |
| COVID-19, University Opening Policies, and Political Influence   | 23          |
| Using UVC Light as an Effective Form of Sanitation   | 26          |
| Improving Mental Health with Safebubble VR   | 27          |
| Addressing the Decline in Pollinator Populations   | 28          |
| Reinventing the Toilet   | 30          |
| Working with Wastewater  | 32          |
| Polylactic Acid (PLA) Replacement to Polyethylene Terephthalate (PET) Water Bottles                                    | 34          |
| Mellow Fellows - An Interactive Pet Caretaking App   | 37          |
| Building Empathy for the Colorblind with Virtual Reality   | 38          |
| Team Waxworms: Degradation of Polyethylene Plastic with Galleria mellonella  | 39          |
| Pocket Portfolio: Personalizing Education in the Modern Age  | 41          |

**1:15 – 1:45 p.m. Student Q&A Session II**

| <b>Teams</b>  | <b>Room</b> |
|---|-------------|
| Positive news website: an alleviation of depression         | 3           |
| Meal Good Feel Good: Meal Replacement Bar to Reduce Obesity | 22          |
| Protective Detective: Gamifying Cyber Safety Education      | 33          |

**1:30 – 2:00 p.m. Student Q&A Session III**

| <b>Teams</b>                                 | <b>Room</b> |
|--|-------------|
| Improving Group Findings in the GCI Programs | 24          |
| LUNA: Accessible Water for All               | 35          |
| hAPPy: Mental Health Application             | 40          |

**1:45 – 2:15 p.m. Student Q&A Session IV**

| <b>Teams</b>                        | <b>Room</b> |
|-------------------------------------|-------------|
| Building the Next AI-Ready Computer | 25          |
| Improving Nurse Education with VR   | 29          |

**2:00 – 2:30 p.m. Student Q&A Session V**

| <b>Teams</b>  | <b>Room</b> |
|---|-------------|
| Tackling the Santa Ana Homelessness Crisis  | 1           |
| Saving the Endangered Mountain Gorillas   | 5           |
| Teaching Ocean Acidification  | 11          |
| Single Use PLA Biodegradable Water Bottle   | 13          |
| Teaching Cybersecurity Best Practices   | 14          |
| AR in Music Education   | 16          |
| Detecting DeepFakes by Comparing Facial Action Units  | 31          |
| Thymol Oil and Imidacloprid Used as an Alternative Pesticide to Reduce Bee Population Decline | 36          |

**2:30 p.m. Poster Awards and Honors Main Room**