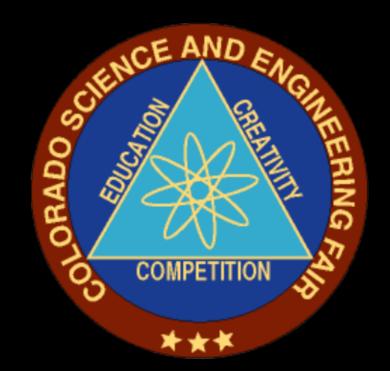
# 2021 Colorado Science and Engineering Fair Denver Metro Regional Awardees



# **DMRSEF'S BEST OF CSEF WINNERS:**

Second Place - Emily Zhang
Fourth Place - Matthew Anderson
Fifth Place - Reese Titensor



## **Senior Animal Sciences**

#### First Place: Reese Titensor

Effects of Cannabidiol Exposure on Cortisol Levels in Danio rerio Embryos with Heat Induced Stress

# **Honorable Mention: Alex Ramsey**

Determining If Common Waste Products, Coupled with a Simple Base, Provide Stable Nutritional Value for Mealworms

# Senior Behavioral and Social Sciences First Place: Mahi Mehta & Shriya Sriram

Testing the Effect of Age and Gender on Body Image
Perception

# Senior Chemistry and Biochemistry Second Place: Arjun Batra

Implementation of a Copper Catalyst for Methane
Hydrate Formation

# Honorable Mention: Kevin Collins & Sydney George

Investigating the Impact of ALS-Associated Point Mutations on ErbB4's Proteolysis

# Senior Energy

## Second Place: Chandler Slowik

Micro Hydroelectric Generator

#### Third Place: Nikhila Narayana

Catching the Sun: Harnessing Stokes Shift to Increase Solar Cell Efficiency

# Senior Engineering Second Place: Tyler Burt

A Novel Mask Insert to Reduce Habitual Particle Transmission

# Third Place: Rithvik Ijju

A Human-Machine Interface That Helps Quadriplegic Patients Communicate by Translating Eye Blinks into Morse Code

# Honorable Mention: Ayan Vaishnav

Designing and Evaluating the Performance of Novel Airfoil
Innovations Using

# Senior Environmental Sciences

# Second Place: Gitanjali Rao

Detection of C. parvum Transposons in Potable Water

# Third Place: Maya Hunter

COVID-19 Shutdowns and Air Quality: A Demographic Analysis

# Senior Math and Computer Science

# First Place: Emily Zhang

Fusing LiDAR and Camera Data for Advanced Context Recognition in Autonomous Navigation Sensory Systems Through Multidimensional Deep Neural Network Architectures

# Honorable Mention: Abbas Shaikh

A Deep Learning Framework for Automated Brain Tumor Segmentation and Survival Prediction Using Multimodal MRI Scans

# Senior Medicine and Health Science

#### First Place: Matthew Anderson

Early Diagnosis of Parkinsonism Via a Smartphone Application

# Third Place: Aditi Avinash

Breakdown of Gluten Proteins Using a Newly Identified Combination of Fruit Derived Enzymes to Alleviate Symptoms of Gluten Intolerance

# Senior Microbiology & Molecular Biology First Place Tia Abraham

Predictive Analysis of Transcription Factors to Directly Reprogram Human Cells

# <u>Senor Physics</u>

# Third Place: Santiago Castillo

Influence of Mars's Gravity and Seismicity on Mining
Waste Dumps Facilities

#### **Senior Plant Sciences**

#### First Place: Cora Becker & Amanda Behmer

A Peek into Plastic Pollution: The Effect of Irradiated
PET Micro-plastic Leachate on Optical Culture Density
of Chlamydomonas reinhardtii

# Junior Behavioral and Social Sciences

# First Place: Mahi & Shriya Sriram

Testing the Effect of Age and Gender on Body Image Perception

## Third Place: Phoebe Donovan & Lola Green

The Cover Up: The Relationship Between Face Masks and the Perception of Facial Cues

# Junior Engineering

#### Second Place: Stefan Zehnacker

Watch It Wash!

# Honorable Mention: Ersel Serdar

Dust Begone: Using Arduinos to Clean Mars Rover Solar Panels

# <u>Junior Environmental Science</u>

## Third Place: Shrreya Sethuramalingam

Chlorophyta and Lemnoideae Components Impacting the Contaminants of H20

# Junior Math and Computer Science

# Third Place: Niram Nagafuji & Akhil Ayalur

Does Benford's Law Match COVID-19 Data?

# <u>Junior Medicine and Health Sciences</u>

#### First Place: Julian Kramer

Don't UV Burning Me: A Comparative Study of Synthetic Versus Mineral Sunscreens

# Second Place: Mila Vigil

Brain Waves and Parkinson's Disease: An Early Detection?

## Honorable Mention: Elizabeth Vossler

Blink-183 – The Effect of Projected versus Reflected Light on Blinking Rate

# **Junior Plant Sciences**

#### Second Place: Kanshita Dam

How Do Vibrations from Sound Waves Affect Plant Growth?