



# Interdisciplinary Research & Project Design

Mid-year newsletter

This interdisciplinary research course is a unique learning experience for our students to conduct an independent research project and initiate positive change in their community. Students choose their own research topic and design their projects using Stanford Design School's Empathy Design Framework. We are highlighting some of this work in this mid-year newsletter.

In addition, we are also looking for support, guidance and resources for our projects. If you are interested in any of the projects listed in the spreadsheet below, please contact the student researchers.

[Student Projects](#)

# Perspective Taking

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These projects span across STEM, humanities, arts, and athletics. Students consider multiple perspectives while researching nuanced topics and are guided by a mentor. This is done through empathy interviews with peers, and community members.

WOO WILLIAMS FROM  
NATIONAL EQUITY PROJECT



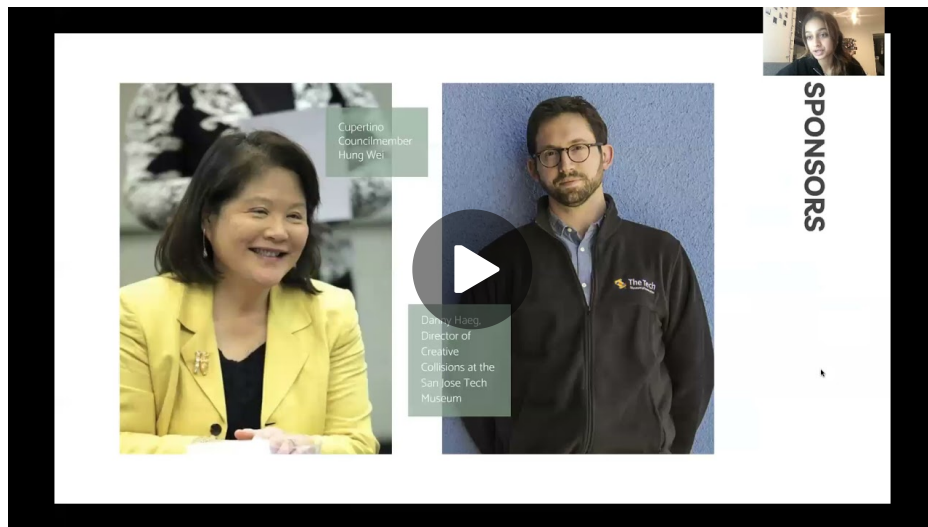
# Community Outreach and Partnerships

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We aim to partner with different stakeholders within and outside of the immediate MV community to address bias and inequities. Each of our end goals revolve around educating the community about those biases by analyzing data and creating tools to address them.

## Project: Data-based solutions to Cupertino's housing crisis

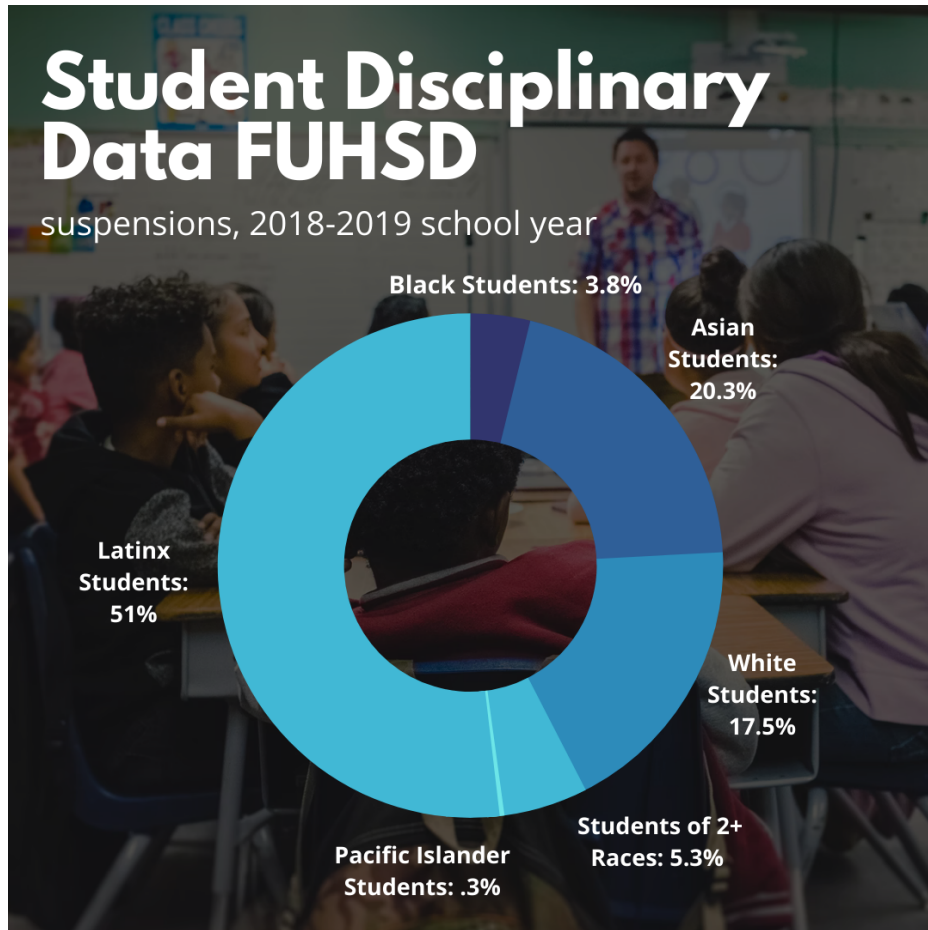
By Anushka De, Mentors: Hung-Wei Chien, Cupertino City Council Member & Danny Haeg, Director of Creative Collisions at The Tech, San Jose



<https://youtu.be/dKgebjYOHxo>

## Project: Bringing Cultural Sensitivity to School Resource Officer Training for equitable disciplinary actions in our district

By Riya Ranjan, Mentor: Mr. Ben Clausnitzer, Principal,  
Monta Vista High School



## Project: Partnerships with Indigenous Communities for Sustainability

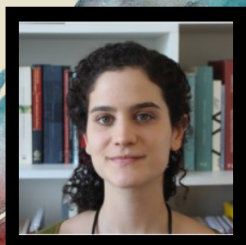
By Karishma Goswami, Mentor: Clara Fortes Brandão, Museo Nacional, Rio de Janeiro, Brazil, National Geographic Grantee

“...for the beauty of its trees, game, and fish. No. They have no more friendship for the forest than they do for the beings who live in it. What they really want is to clear it all to feed their cattle and to tear everything they can out of its soil.” - Davi Kopenawa



Gregg Castro of the Ramaytush Ohlone tribe whose videos and initiatives I've researched and whose group I hope to work with .

Image of the Amah Mutsun tribe whose Save Jurassic project I've been researching.



Brazilian Anthropologist Clara Fortes Brandao who is my sponsor for my project which centers Indigenous solutions to climate change, uses an equity lens to analyze their contributions, and builds partnerships with members of Indigenous communities in California.









# Student Wellness and Mental Health

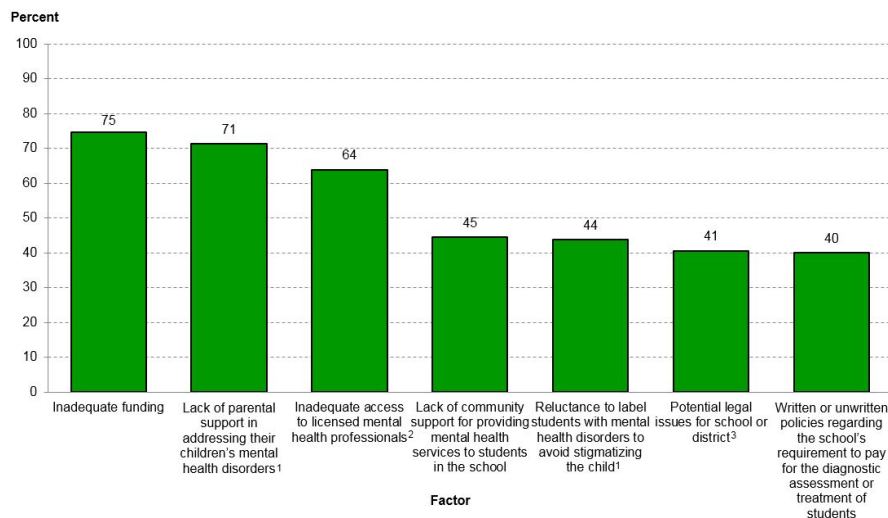
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Although each project is distinct, our common goal is to extend resources that promote self-empowerment, increase awareness and destigmatize mental health

struggles. Our projects explore sexual assault, media portrayals of teen relationships and sex, and gender disparities in support for individuals with ADHD and address them using unique forms of therapy and student wellness spaces.

## Project: Promotion of Student Mental Wellness through new student-based mental wellness school resources

By Nyssa Chadha, Mentors: Ms. Doreen Bonde, Library Media Teacher & Ms. Leila Lurie, School-based Therapist and Curriculum Lead



Student wellness and mental health are top priority for student researchers. Our goal is to decrease stigma with regards to mental health. We wish to increase awareness and use of the existing resources, and provide new resources such as writing therapy as a way to deal with trauma.

## Project: Student Wellness Center

Project: Student researchers will be working with the mentors to create a wellness center for our student body

By Atmaja Patil, Mentors: Ms. Doreen Bonde, Library Media Teacher & Ms. Leila Lurie, School Based Therapist and Curriculum Lead

**RESEARCH QUESTION**

How might we empower students at Monta Vista to access mental health resources more effectively?

**EXPLAIN THE WHY**

School based mental health resources can "improve school attendance, improved classroom behavior, lower rates of depression," (CA Dept. of Ed)

**RESEARCH FINDINGS**

- Some roadblocks to students accessing care
- Lack of transparency with friends and family on their mental health.
- Effectiveness of the resources themselves.

**EMPATHY INTERVIEWS**

Issue seems to be rooted in the silence among students with regards to mental health and its broader importance.

The resulting conformity has prevented students from accessing mental health resources.

**SUMMARY OF PROJECT**

[https://youtu.be/U\\_ClkjdgNb0](https://youtu.be/U_ClkjdgNb0)

# Project: Effective Therapies for Trauma Victims

By Nethra Narasimhan, Mentor: Ms. Vennessa Nava,  
English Teacher & Ms. Doreen Bonde, Library Media  
Teacher

# STUDENT'S EXPERIENCES WITH TRAUMA

**69%**

of Junior students surveyed have never talked about trauma or personal experiences in school classrooms

## 4 TYPES OF THERAPY

JOURNALING

SPORTS

MUSIC

ART

**41.3%**

OF STUDENTS DID NOT KNOW WHAT THE #METOO MOVEMENT IS

**83%**

OF STUDENTS BELIEVE CREATIVE WRITING AND THERAPY FORMATS SHOULD BE TAUGHT IN LITERATURE CLASSES



Inclusive Student Body

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Our projects are targeted around bringing inclusivity within the Monta Vista student body. From increasing Asian American representation to empowering English learners, with our projects, we hope to create an inclusive environment where every individual has an equally powerful and respected voice. We aim to target these inequities at both a school and district-wide level, hoping to enforce our changes for future students.

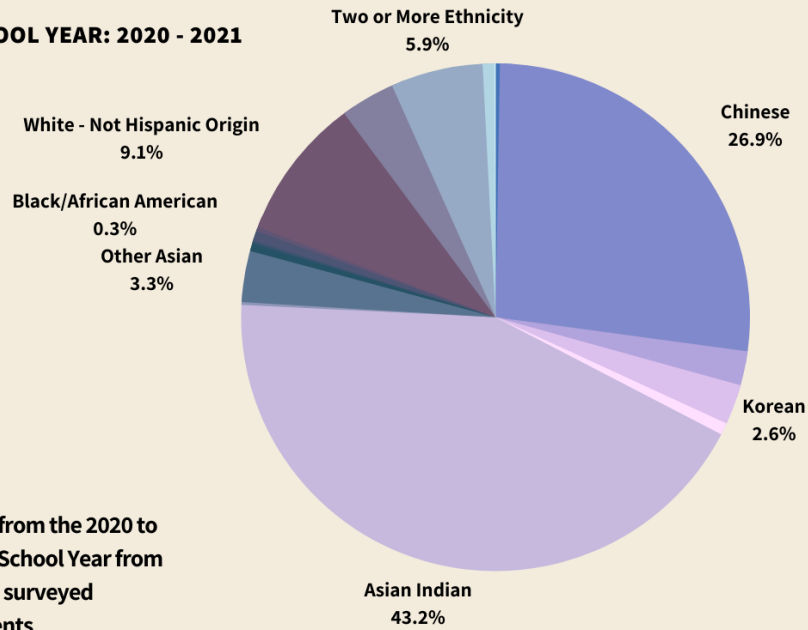
## Project: Increase Asian American representation at Monta Vista to create a more informed and representative student body

By Mary Choy and Shreya Mantripragada, Mentors: Ms. Bonnie Belshe, AP US History Teacher



# Monta Vista Student Racial Data

**SCHOOL YEAR: 2020 - 2021**



Data from the 2020 to 2021 School Year from 1,842 surveyed students

## Teen Health and Nutrition

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Student researchers are exploring the differences in nutrition and habits in young adults with the goal to promote student health through nutrition education and action. The projects focus on addressing nutritional inequities spurred by socioeconomic status, food allergies,

and more. The action taken will work to build healthier and more inclusive consumption habits at the community level.

## Project: Cafeteria Meals for Teens with Allergies

By Vy Pham, Mentor: Mr. Edgar Rodriguez, Cafeteria Manager

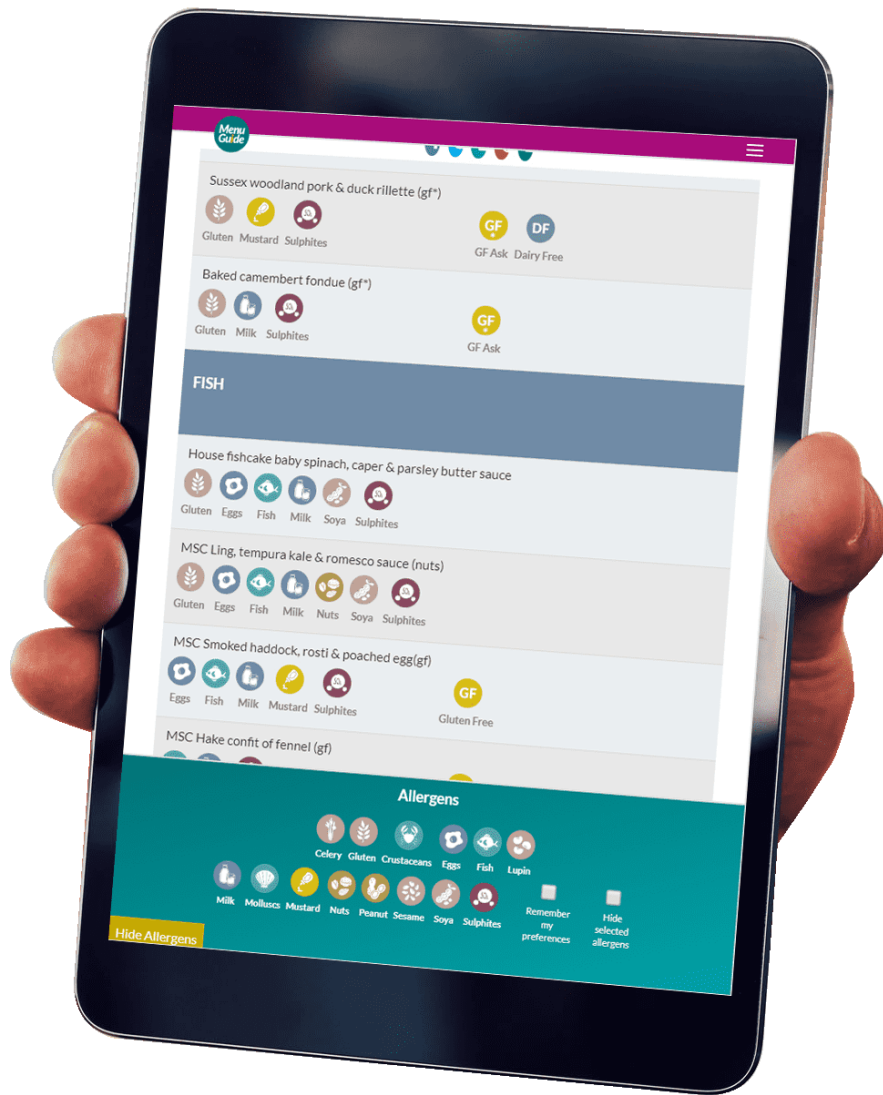


Photo by MenuGuide

## Project: Socioeconomic Disparities in Teen Nutrition

By June Wang, Mentor: Ms. Michelle Azurin, Diversity Outreach Coordinator, UC Berkeley School of Public Health

## Teen Nutrition Empathy Interviews Findings on Healthy Eating Habits

**62.5%**

are conscious of their food choices for health and dietary purposes

**40%**

prefer fruits over vegetables for produce consumption

**87.5%**

wish to build healthier consumption habits

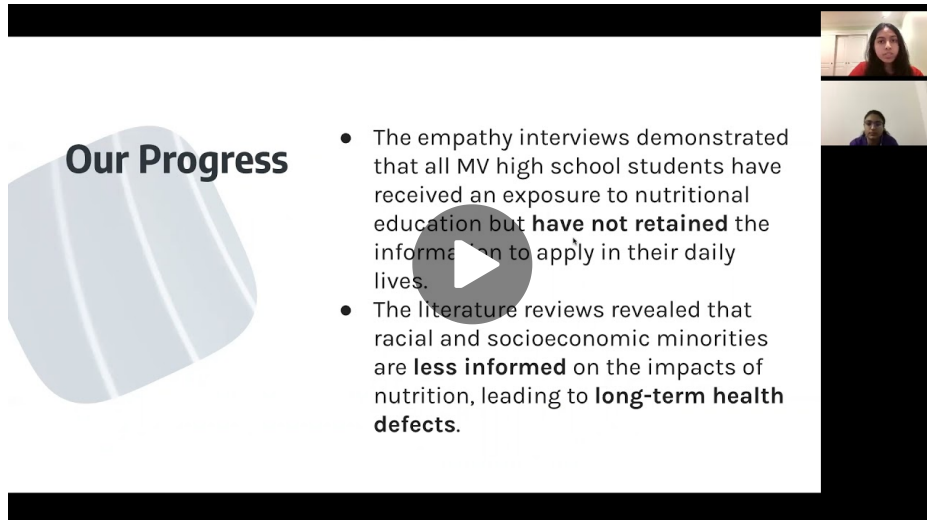


Source: Students interviewed at FUHSD high schools and Cupertino middle schools.

Graphic by June Wang

Project: Socio-economic Disparities and Nutritional Awareness

By Pooja Jakkampudi, Sanya Garg Mentor: Ms. Jenna Smith, Physiology Teacher



**Our Progress**

- The empathy interviews demonstrated that all MV high school students have received an exposure to nutritional education but **have not retained** the information to apply in their daily lives.
- The literature reviews revealed that racial and socioeconomic minorities are **less informed** on the impacts of nutrition, leading to **long-term health defects**.

[https://youtu.be/\\_DsLIN-Q8mI](https://youtu.be/_DsLIN-Q8mI)

# Inequities

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Our projects aim to tackle the microcosmic social and educational inequities at our high school and beyond. By incorporating various lenses, disciplines and technologies, student researchers intend to address systemic inequalities that affect marginalized groups and minorities, evening the playing field for a stronger community.

Project: How might we increase high school foreign language acquisition and retention rates at Monta Vista?

By Lavi Sundar, Mentor: Madame Sarah Finck, French Teacher

**EXPLAIN THE WHY**  
Foreign language skills result in:

- Increased cultural education
- Improve job market prospects
- Increased cognitive benefits

**EMPATHY INTERVIEWS**  
Users communicated a desire for

- More open, less pressuring environment in class
- More spontaneous verbal interaction
- Middle school acquisition

**RESEARCH FINDINGS**  
The biggest factors in language acquisition across countries and user pools are

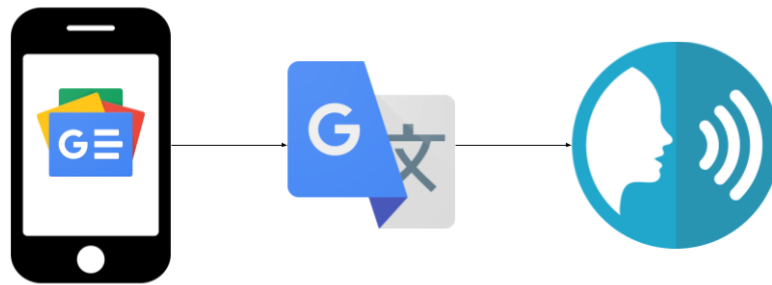
- Students' motivation
- Face-to-face social interaction
- Exposure to foreign language media

<https://youtu.be/LPAXudtKG4M>

## Project: Overcoming language barriers to access knowledge

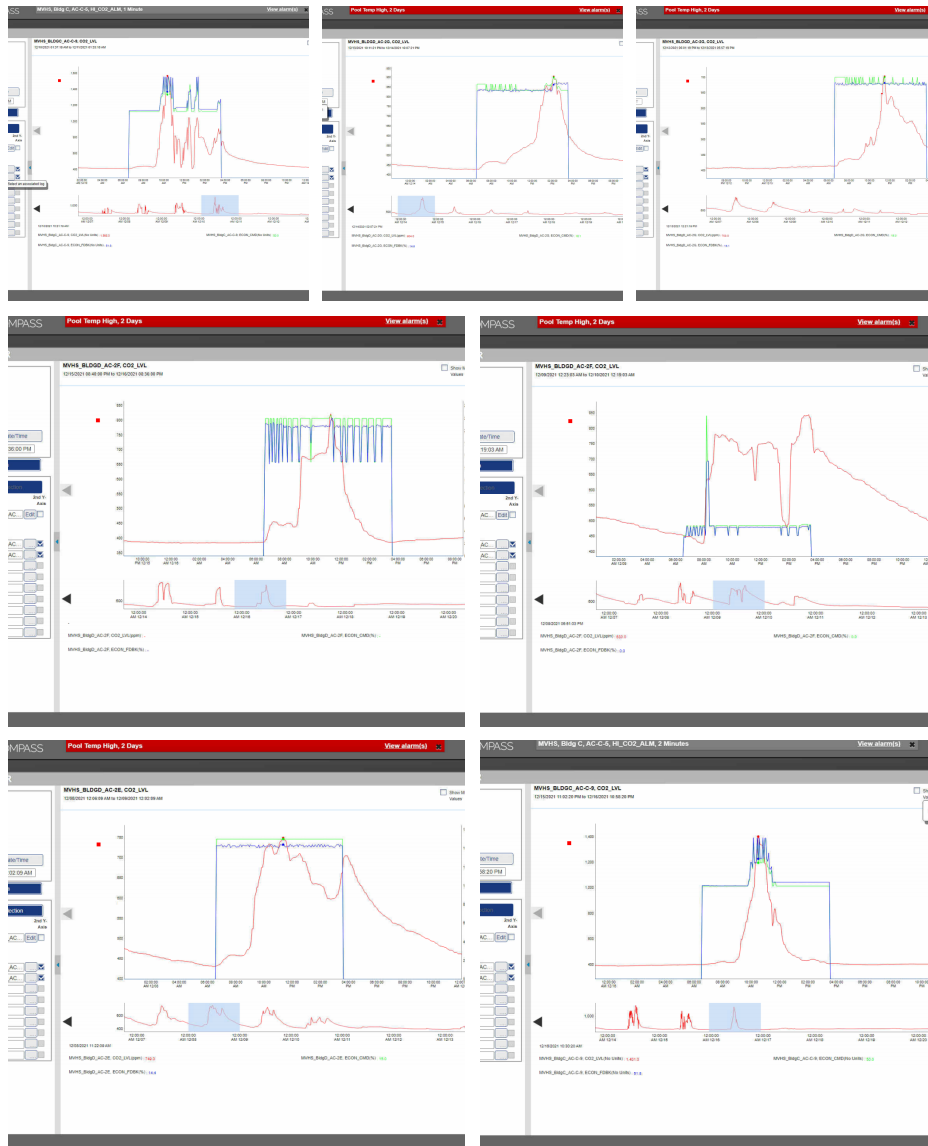
By Keshav Balaji, Mentor: Ms. Sydney Fernandez, Assistant Principal

Mobile app that reads personalized news headlines in a desired language



## Project: Identifying CO2 level disparities in learning spaces

By Leela Srinivas and Arya Balasubramaniam, Mentor:  
Professor Sekhar Kondepudi, Associate Professor at  
National University of Singapore



These graphs show the fluctuation of carbon dioxide levels in one MVHS classroom throughout the week. With little to no HVAC control, this causes complications in filtering out that carbon dioxide.

# Impact of Social Media on the Community



With the growing use of social media in our day to day lives, the content portrayed on these platforms filter the spread of information as well as the kind of content to cater towards a certain audience. Consequently, this wrongful filtration negatively affects community members by causing polarization and mental health issues.

## Project: How might we reduce the effects of negative social media content on teens with body dysmorphia?



By Arushi Tyagi and Hinako Takamatsu, Mentors: Mr. Richard Prinz, School Based Therapist





Photos courtesy of Unsplash

**SUMMARY OF PROJECT**

**EXPLAIN THE WHY**

Many social media platforms like Instagram and Facebook, continue to promote negative content for those susceptible to eating disorders and social body dysmorphia (BDD). It's imperative that we find a way to combat the negative impacts of social media by working towards the need of the users specifically.

**EMPATHY INTERVIEWS**

Interviews were conducted on high school students with varying ethnicity, gender, and grade levels. Many of those we interviewed raised social media as a factor for triggering body insecurities, which emphasized the need to construct a solution against the promotion of negative content on social media.

**RESEARCH FINDINGS**

Our research targets people suffering from body dysmorphia and how social media encourages negative and harmful content towards certain demographics of people with this disorder. We conducted surveys to determine whether someone may be at risk for BDD and how social media impacts them. These surveys concluded that most women had more issues with their body and most body trends are started by white males of the upper class like the CEOs of the big social media companies.

<https://youtu.be/ALjj2igwOB4>