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A Comparative Analysis Between the Engaged Parts of the Brain During Social Interaction on a Video Call vs. Physically
Anaaya Dalal, Ishan Dey, and Mariah Mathias

Lockdown: America's Gun Legislation in the Wake of Mass Shootings in Schools
Alexei Linger, Gabby Greer, and Jenna Purslow

Symptoms of the Infodemic: How COVID-19 Misinformation on Facebook Impacts Its Senior Users
Iris Chau, Kevin Li, and Marcus Hsieh

Octocko Gloves: Octopus and Gecko Inspired Climbing Mechanism
Alexi Stapf, Anirudh Rao, and Kaitlyn Hom

Effect of Climate Change on Kelp Biomass
Aarush Pattnaik, Claire Kim, Sharon Zhu

The Impact of Twitter: A Content Analysis of How the Black Lives Matter Movement Originated
Jennifer Jimenez, Sara Zamora Galeno, and Sohee Kim

Using Zebrafish as a Model to Demonstrate Shared Dopaminergic Pathways Between Pharmacological Manipulation of Anxiety-Like Behaviors and Cocaine Withdrawal-Induced Anxiety-Like Behaviors
Emilia Smith, Kathleen Petcu, and Krishna Ajjarapu

Using Grad-CAM to Improve Model Interpretability for COVID-19 and Viral Pneumonia Diagnosis From Chest X-Ray Scans
Debanshi Misra, Irina Malyugina, and Reha Matai

(Dis)Connected: Evaluating Digital Support Programs for Low-Income Students in Northern California
Charles Jiang, Kevin Liebetrau, and Liwen Sun

US-Iran Relations: Changing the State of Conflict in the Middle East Through Government Loans to Oil Refineries
Aadhav Rajesh, Caedin Manners, and Cindy Yu

Class Infraction: Investigating the Relationship Between Hydraulic Fracturing, Groundwater Contamination, and Communities
Amy Zhu, Anamaria Basave, and Emma Johnson

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Amphibia: Rethinking Life Jackets with Smart Wearable Technologies Enabling Safety, Comfort, and Fashion
Diptanshu Sikdar, John Rojko, and Nina Hunt

Comparative Analysis of First and Second Generation Antipsychotics in Humans With Positive Symptoms of Schizophrenia
Catherine Quinones, Ira Chaturvedi, and Melanie Lai

The New Generation of Activism: Self Education of the Black Lives Matter Movement on Instagram
Haoran Qu, Jennifer Fang, and Sadie Brett-Chin

The Politics of Manipulation: How Facebook and Twitter Negotiate With Targeted Ads
Anya Agarwal, Rhea Johnson, and Timothy Ha

Using Depth-Aware Video Interpolation to Boost Frame Rate in Standard Real-Life Footage
Carol Tu, Surya Jasper, and Weilin Sun

Using Deep Learning to Analyze the Driveability of Autonomous Vehicles on Unmarked Terrain
Arjun Gupte, Charles Zhu, and Zini Chakraborty

Enhancing Medical Drug Delivery Procedures via the Application of Soft Milli-Robotics
Isha Venkatapathy, Sanika Patil, and Sidhant Rajadnya

The Threat of Environmental Racism to National Security: Toxic Waste Disposal and Pollution in Marginalized Communities
Kathryn Chenoweth, Ryan Schwartz, and Thresia Vazhaeparambil

The Reception of the Black Lives Matter Movement: How Does the Media Source That People Consume Affect Their Perception?
Angela He, Faith Cruz, and Lalima Saini

Implementing Solar Energy to Reduce Annual Carbon Dioxide Emissions From Non-Renewable Energy Power Plants in Los Angeles by 25%
Chloe Kim, Elizabeth Chung, and Nandini Neralagi

Modeling the Probability of Malignant Brain Tumor Development in Larval Zebrafish (*Danio rerio*) After Exposure to Radiation
Matthew Kirkham, Nica Tofighbakhsh, and Nikita Senthil

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Decoding Discrimination: How Bias is Integrated Into Resume Screening Algorithms
Jessica Fan, Sophia Chen, and Youqi Huang

SolidSense: A Pneumatic Approach to Haptic Technology
Mark Pindur, Rachel Lin, and Varun Sreedhar

Analyzing Racial Bias in Facial Recognition Systems
Angela Choi, Arvin Zhang, and Shruthi Solaiappan

Black Lives Matter Movement: Scope of Legislative Police Reform
Lydia Delonis, Richa Malhotra, and Rishi Vanga

Tunnel Vision: The Unintended Consequences of US Arms Export to Saudi Arabia
Avery Sands and Dylan Yang

Predicting Parkinson's: Using Neural Networks to Evaluate the Genetic Risk Factors Behind the Disease
Andrew Yuan, Isha Jagadish, and Trisha Gongalore

Air Pollution, Crime and Environmental Injustice in Los Angeles County
Darynne Lee, Jenny Hou, and Shengming Gao

ProJacket: Injury Prevention Through Inflatables and Soft Robotics
Alex Chang, Julia Zhao, and Justin Gubbens

Making Black Lives Matter Go Viral: How Social Media Users Counteract Racial Injustice
Kate Mekechuk, Owen Ye, and Saahas Kohli

Inequity in Education: Analyzing the Extent of the Educational Opportunities Created for Chicanos Through the Chicanx Movement in California
Katherine Kricorian and Osiel Ocampo

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A Comparative Study of Vehicle Emission Control In Delhi and Beijing to Mitigate Air Pollution
Dhaani Singhal and Siyu (Tracy) Che

American Sign Language to Text Translation Using Convolutional Neural Networks
Brian Li, Kristine McLaughlin, and Parisa Khashayar

The Future of Climate Strikes: How Age Relates to Participation in Environmental Social Movements
Nick Ma, Ronald Wang, and Xuan (Sherry) Zhao

Privacy or Security: How Privacy Laws Relate to Cybercrime in the United States
Coline Luo, Nishank Kolla, and Pallavi Bommareddy

Redesigning Conventional Helmet Padding Using Smart Inflatable Technology to Maximize Impact Protection From Incoming Collisions
Ananth Goyal, Luke Shao, and Ojas Karnvat

Deep Learning Neural Network Variably Predicts Larval Zebrafish Sensitization in Noxious Irritant With Different Model Assumptions
George Hosein, Paul Kang, and Tianle (Sunny) Zheng

Westernizing Southeast Asia: The Cultural Hybridization of Western and Native Cultures in Singapore, Indonesia and Thailand
Alexandre Duforest, Lochlan Bailey, and Santosh Areti

Vehicle License Plate Recognition and Detection Using Neural Networks
Alan Tian, Arnav Dani, and Lillian Yu

Optimizing Urban Landscaping Trees for Carbon Sequestration in Mediterranean Climates
Aditi Shankar, Catherine Xu, and Sophia Qin

From Minneapolis to Madrid: How the Black Lives Matter Movement Has Revealed the Plight of Marginalized Communities Across the World
Mehek Kandru, Natasha Purviance, and Vasundhara Rajesh

Twisting the Narrative: The Whitewashing of the Stonewall Riots
Nayeli Duran, Olivia Vesovich, and Ryder Coble

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Valine, Alanine, and Mustard Oil's Effect on Brain Activity Levels Within Specific Locations in the Zebrafish Brain

Brooks McQueen, Daniel Kozlov, and Sofia Birchenall

Augmented Knee Protection Through Fall Detection and Impact Reduction With the Comfort Provided by Alleviation Design

Anshul Patil, Isabelle Millan, and Joseph Zhang

Identification and Classification of Skin Cancer Using Deep Neural Networks

Arjun Kohli, Kunal Srivastava, and Srivatsava Missula

Censorship and Misinformation: How Nigeria's "Social Media Bill" Impacts Freedom of Expression and Media Trust

Diane Chen, Max Alikian, and Rumaysa Ahmad

The World's Worst Humanitarian Crisis: US National Security and the Yemen Crisis

Grace Anderegg, Natalie Chow, and Shubh Tandon

A Comparative Study on the Severity of Parkinson's Disease as a Consequence of the Mutations in PINK1 and Parkin Genes in Relation to Age

Ethan Wang, Justin Vaughn, and Kavin Wazhi

How Different Management Practices Influence Biodiversity in Various Marine Protected Areas

Keyla Juarez, Sarah Campos, and Zoe Flanagin

Cancel Culture: How Prominent YouTube Influencers Recover From Public Shaming on Social Media

Adam Xu, Cindy Zhang, Craig Cultice, and Wesley Lin

The Ways in Which the Origins of the Korean Democratization Movement Model and Parallel the Origins of the Hong Kong Protests

Clara Oh, Daniel Chang, and Giana Park

Application of Soft Robotics in Body Assistance: A Wrist Rehabilitation Device Using Soft Continuum Actuation and Embodied Intelligence

Jiaqi Wang, Kunal Kapur, and Ria Jain

Using Facial Detection to Determine the Driver's Fatigue

Chloe Harrah, Vikram Iyer, and Rishabh Sharma

Summer Research Academies
Summer Sessions

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"Our Ice is Vanishing": The United States' Climate Impact on the Arctic and its Natives
Finlay Hastings, Olivia Kurtz, and Rachel Lee

Bark Beetles and their Impact on Tree Water Uptake and Fire Susceptibility in California
Anterjot Jaj, Megan Dhingra, and Ryan Li

Comparison and Meta-Analysis of Dopamine Receptor Antagonists and Agonists on the Treatment of Severe Anorexia Nervosa
Hannah Cho, Jessica Xiao, and Joan Thyagarajan

Why Do People Join Mental Health Movements? Modeling and Evaluating the Multivariable Decision Making Process in Relation to Social Context
Jay Gupta and Mary Indresano

SimShake: A Haptic Emulator for Safe Handshakes During the COVID-19 Pandemic
Anton Semerdjiev and Charlie Sun

Analyzing Computer-Aided Diagnostic Methods for Lung and Heart Disease Detection From Chest X-Rays
Alan Wang, Likhit Gudisay, and Sohrab Hassibi

Warfare of the Future: American Response to Russia's State-Sponsored Cyber Attacks
Ian McGuire, Sam Liu, and Yash Rajani

Disingenuous Dining: Evaluating the Environmental Impacts of Various Plant-Based Meat Alternatives in an Environmentally Regressing World
Chelsea Jiang, Stephane Cui, and Steven Dong