

69th Annual GSDSEF - 2023
Qualifying Students for the California Science and Engineering Fair
(by Alphabetical Order)

Student Last Name	Student First Name	Div	Proj ID	Category	Project Title	Gr	School	Teacher Name
Abdulaziz	Omar	JR	537	BEHA	Gender Stereotypes in Early Childhood Development	7	Bright Horizon Academy 6-8	N. Naserelddin
Ajanovic	Aya	JR	515	ANIM	Red-40 Affect on Daphnia	7	Bright Horizon Academy 6-8	N. Naserelddin
Allende	Carmina	JR	770	EEMT	How Do Different Surfaces of Tennis Courts Affect the Way the Ball Bounces?	7	Nazareth School	M. Reed
Allport	Alexander	JR	702	EAEV	Corn Husks Get More Done	7	The Children's School	D. Quincannon
Aly	Omar	JR	609	BMDE	The Effect of Weight Training for Throwing a Football	7	Bright Horizon Academy 6-8	N. Naserelddin
Aravind	Vishnu	SR	209T	CBIO	Using ML to Repurpose FDA Drugs for the Treatment of Diabetic Cardiomyopathy	11	Del Norte High School	S. Kumar
Arnaudy	Elodie	JR	835	PHYS	Flipping Fast: The Effect of Body Shape on Flip Speed	7	City Tree Christian School 6-8	M. Lee
Bantval	Dhruv	JR	604	BMDE	Smart Glove with ASL-to-Speech Conversion to Assist the Hearing Impaired	8	Pacific Trails Middle School	E. Main
Bantval	Maya	JR	583	BCHM	Detection and Comparison of Vitamin C Enriched Beverages	6	Sage Canyon Elementary School	K. Arthur
Bosworth	Arya	SR	372T	MATH	Multi-Resolution, Multi-Heuristic, Polynomial-Based, A* Motion Planning With Semantic Consideration	9	Poway High School	K. Woldseth
Bosworth	Rohan	SR	372T	MATH	Multi-Resolution, Multi-Heuristic, Polynomial-Based, A* Motion Planning With Semantic Consideration	12	Poway High School	K. Woldseth
Botello	Natalie	SR	153T	BMDE	Automating Nutrition Administration as an Approach to Preventing Malnutrition and Dehydration in Dementia Patients	12	Central Union High School	A. Ortiz
Brown	Logan	SR	333T	EEMR	A Differentially-Geared, Omnidirectional Robotics Platform With Autonomous Jerk-Limited Navigation	10	High Tech High North County	C. Sailor
Capaldi	Charlotte	JR	809	MCRO	Investigating the Effectiveness of a UVC Wand on Bacteria Mortality	7	The Rhoades School	R. Hunker

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Capetanakis	Victoria	JR	806	MCRO	Which Harbors More Bacteria: a Phone or a Toilet?	7	St. John School - Encinitas, CA	G. Heins
Carreon	Marcello	JR	832	PHYS	Does the Amount of Wire on a Guitar Pickup Affect Sound	8	All Hallows Academy	A. Branson
Catanzaro	Marcus	SR	355	EEMT	Optimizing Heat Transfer of Cooking Surfaces Using Various Strategies of Temperature Control	11	Cathedral Catholic High School	M. Rafie
Chandra	Vikramaditya Sidharth	SR	393	PHYS	Pathfinder: A Novel Convolutional Neural Network for Classifying Photometric Surveys	10	San Marcos High School	S. Bireddy
Chang	Melinda	SR	243	COMP	Albio.js: A Compiler-Powered Reactivity Library for Building Performant User Interfaces	11	Canyon Crest Academy	E. Gerstin
Chen	Justin	SR	163	BMDE	Using Artificial Intelligence to Track Cellular Changes After Laser-Induced-Shockwave as a Model of Traumatic Brain Injury	12	Torrey Pines High School	B. Belyea
Chen	Steven	JR	602	BMDE	Magnetically-Powered Micro Train	7	Pacific Trails Middle School	A. Milholland
Chen	Trevor	SR	213	CBIO	Use of Deep-Learning to Find Inhibitors for Aldose Reductase as Treatment of Diabetic Cataracts	10	Westview High School	S. Halander
Chen	Zoey	JR	830	PHYS	Circling around Earth or the Sun? Using a Cell Phone APP to Reconstruct Orbits of the Moon and Planets in the Sky	7	Carmel Valley Middle School	T. Kim
Cooper	Aaron	JR	704	EAEV	The Effect of the Moon and Sun's Gravitational Force on Volcanic Eruptions	6	Community Montessori Charter School Carlsbad	I. Cooper
Dagar	Arnav	SR	257	COMP	Where' s Waldo Going - A Bayesian Approach for Localizing a Moving Robot	9	Canyon Crest Academy	A. Siegel
Day	Andrew	SR	162	BMDE	Gasping for Air? Blame Neanderthals.	11	Torrey Pines High School	B. Belyea
Diep	Emily	JR	684	COMP	Virtual Piano Teacher - Personalized Piano Lessons	7	Connect Academy Poway Unified	J. Teixeira

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Dogra	Saanvi	SR	202	CBIO	Investigating the Underlying Molecular Patterns in Aggressive Brain Tumor ETMR	9	Del Norte High School	S. Dhanda
Ehsan	Anabia	JR	504	ANIM	Impact of Vitamins on Planaria Regeneration: A Model for Regenerative Medicine	6	Bright Horizon Academy 6-8	N. Nasereldin
Fan	Benjamin	SR	250T	COMP	Deep Learning for Solving and Estimating Dynamic Macro-Finance Models	12	The Bishop's School	M. Jaiclin
Fan	Kara	SR	383	MCRO	A Self-Disinfecting Nanomaterial for Future Space Travel	12	Westview High School	S. Halander
Fan	Leanne	SR	168	BMDE	Detecting and Treating Mid-Ear Infections Using Acoustic Reflectometry and Blue Light	9	Westview High School	S. Halander
Ffrench	Ellarose	JR	854	PLNT	Effect of Reclaimed, RO, and Well Water on Radishes	7	St. Gregory the Great Catholic School	S. Dasgupta
Foss	Spencer	SR	112	BEHA	The Sunk Cost Fallacy and the Applications of Priming	10	San Diego Jewish Academy 9-12	P. Hagarman
Ganji	Vidha Yadav	SR	224	CBIO	Machine-Learning Based Early Detection of Breast Cancer Using Blood-Based Biomarkers	9	Del Norte High School	Nagamalleswara R. Ganji
Gantla	Maanaskumar	SR	203	CBIO	Screening of FDA Approved Drugs for Potential Alzheimer's Therapeutics Using Machine Learning	12	Canyon Crest Academy	A. Siegel
Gao	Sarah	SR	290	EAEV	Identification and Experimental Characterization of Plant Seeds as Effective Flocculants for Water Treatment	10	Canyon Crest Academy	E. Gerstin
Geering	Giselle	SR	219T	CBIO	Identifying Novel Inhibitors of Cholera Toxin Subunit B	12	Bonita Vista High School	M. Mardahl-Dumesnil
Hulse	Madison	JR	823	PHYS	The Effect of String Tension on a Tennis Racket's Power	7	Nazareth School	M. Reed
Jaimovich	Adam	JR	607T	BMDE	Efficacy of Various Spice Extracts in Combating Potential Stimulant Hazards	7	The Rhoades School	R. Hunker

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Kalyanaraman	Anirudh	SR	155	BMDE	Cobinamide - A Novel Antioxidant to Protect Against Polyaromatic Hydrocarbon-Induced Cardiac Cytotoxicity	10	Mt. Carmel High School	A. Klingborg
Khan	Safwa	SR	116	BEHA	Learned Helplessness on Academic Performance across Different Age Groups	11	Bright Horizon Academy 9-12	N. Nasereldin
Khattar	Zinia	SR	166	BMDE	Discovery of Stress Pathways Targets to Map Gene Function on Regulatory Networks	10	Del Norte High School	J. Cheskaty
Kim	Angelina	SR	331	EEMR	Deep Reinforcement Learning of PID Control for Rotational Wing Aerial Vehicles	10	The Bishop's School	M. Jaiclin
Kim	Hudson	SR	276	EAEV	Canopy: A Deep Learning Approach To Rainforest Deforestation Detection And Response	10	Westview High School	W. Kim
Kozak	Patrick	JR	701	EAEV	Are The Homeless Encampments Along Rose Creek Polluting It's Water?	7	All Hallows Academy	A. Branson
Krishnan	Maya	SR	157	BMDE	Effect of Human Dermal Fibroblast Cells on Lipopolysaccharide (LPS)-Induced Neuroinflammation	11	La Jolla Country Day School	D. Valji
Kulkarni	Rishika	SR	191	CHEM	Novel PSS-Driven Ligand Exchange on the Surface of Gold Nanocubes	11	Francis Parker School	J.P. Pierce
Kumar	Alex	SR	209T	CBIO	Using Machine Learning to Repurpose FDA Drugs for the Treatment of Diabetic Cardiomyopathy	11	Del Norte High School	S. Kumar
Kumar	Sanjana	SR	284	EAEV	Utilizing 3D-Printed Engineered Living Materials to Break Down Environmental Pollutants	11	Francis Parker School	J.P. Pierce
Leem	Ethan	JR	803	MCRO	Most Effective Natural Anti-Bacterial Agent	8	Pacific Trails Middle School	E. Main
Liu	Derek	SR	371	MATH	Arrangements of Simplices in Fine Mixed Subdivisions	12	Torrey Pines High School	B. Belyea

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Long	Lily	JR	542	BEHA	Exploring Academic Setting Applications of a Turing Test Derivative	8	The Rhoades School	R. Hunker
Madhukara	Nandana	SR	220	CBIO	Lipid Bilayer Bending Due to Membrane-Protein Interactions: A Computational Investigation	10	Canyon Crest Academy	E. Gerstin
Magtoto	Cherise	SR	403	PLNT	The Effects of Ibuprofen on the Growth and Germination of Lactuca sativa.	11	Bonita Vista High School	J. Ekstein
Mandyam	Tanya	SR	101	ANIM	Circadian Rhythm Disturbance Affects Running Activity and Gut Microbiome in Rats	9	Westview High School	M. Christopher
Marsh	Olivia	JR	836	PHYS	Moon and Star Light	8	Eastlake Middle School	A. Thacker
Martin	Jaden	SR	142	BCHM	The Concentration Difference of Proteins During Different Stages of Lactation in Bovines	11	Central Union High School	L. Rueda
Matkov	McKayla	JR	703	EAEV	The Effect of Particle Size on the Rate of Erosion through Wave Action	8	The Children's School	D. Quincannon
Montemayor	Maliya	JR	751	EEMT	Honeycombs - Not Just for the Bees: Optimizing Cell Types for Architecture	8	St. John School - Encinitas, CA	G. Heins
Nava	Diego	SR	407	PLNT	The Effect of San Diego River Water on Raphanus raphanistrum Seed Germination	12	Bonita Vista High School	M. Mardahl
Nayak	Ayush	SR	395	PHYS	Quantum Dot based Quaternion High-Transport Transistor Technology	12	Westview High School	S. Halander
Nayebnazar	Arshia	SR	223	CBIO	Precision-Recall Adversarial Network (PRAN): A Novel Deep Learning Framework for Improvement of Clinical Binary Classification	11	Canyon Crest Academy	T. Mauro
Nguyen	Vivian	SR	219T	CBIO	Identifying Novel Inhibitors of Cholera Toxin Subunit B	12	Bonita Vista High School	M. Mardahl
Ouchmame	Zackaria	JR	738	EEMR	Smart Medicine Cabinet	7 8	Bright Horizon Academy 6-8	N. Nasereiddin
Owen	Brooklynn	JR	831	PHYS	Putts to Perfection: Comparing Repeatability of Heavy and Light Putters	7	Classical Conversations	K. Owen

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Pacente	Jack	JR	753	EEMT	Improving Compression Strength of Polyethylene Terephthalate Glycol (PETG) through the Process of Annealing	7	Mt. Helix Academy	K. MacDonald
Parthasarathy	Jeyanth Narayan	JR	771	EEMT	Effects of Reverse Vertical Stabilizers on Aeroplanes	7	Pacific Trails Middle School	A. Milholland
Perham	Josephina	JR	525	BEHA	The Effect of Age and Gender on Purchasing and Awareness of Purchases	7	The Children's School	D. Quincannon
Pradis	Leilani	SR	153T	BMDE	Automating Nutrition Administration as an Approach to Preventing Malnutrition and Dehydration in Dementia Patients	12	Central Union High School	A. Ortiz
Proshkin	Alexander	SR	254	COMP	Investigating the Synergetic Integration of Multifaceted Abstractions with Constraint Programming for Enhanced Time Interval Optimization	12	Canyon Crest Academy	E. Fisher
Qarar	Yusra	JR	585	BCHM	Will Soaking Food in Water Before Cooking Remove Starch from It?	7	Bright Horizon Academy 6-8	N. Nasereldin
Qiao	Edward	SR	250T	COMP	Deep Learning for Solving and Estimating Dynamic Macro-Finance Models	12	The Bishop's School	M. Jaiclin
Ravi	Medha	JR	539	BEHA	EarYe! EarYe!: Effects of Earbuds, Ordinary Headphones, and Noise-Canceling Headphones on Desired Music Decibel Level	7	The Rhoades School	R. Hunker
Rodriguez	Eric	JR	524	BEHA	Stroop Effect: Rotating Labels in Shapes and Their Effect on Response Time	8	Mt. Helix Academy	K. MacDonald
Rupesh	Bhadra	SR	208	CBIO	Determining Genetic Biomarkers as Predictors of Response to Anti-PD 1 Cancer Immunotherapy	11	The Bishop's School	L. Keller
Sayed	Zakari	JR	607T	BMDE	Efficacy of Various Spice Extracts in Combating Potential Stimulant Hazards	7	The Rhoades School	R. Hunker
Sengupta	Srija	SR	280	EAEV	Good on Land and Bad in Water: Effects of Fertilizer-Rich Runoff on Algal Growth	10	Westview High School	S. Halander
Shen	Emma	SR	253T	COMP	Grow & Give	11	Del Norte High School	J. Cheskaty

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Sridharan	Agastya	SR	252	COMP	Improved Inductive Performance on Small Datasets Using Hyper-Connected Neural Architectures, C. Elegans-Inspired Networks, and Evolutionary Modeling	11	Scripps Ranch High School	P. Fowler
Sternson	Samuel	JR	863	PLNT	Production of Natural UV-absorbing Sunscreens in Plant Leaves	7	The Rhoades School	R. Hunker
Tianshi	Kyle	SR	295	EAEV	Rapid Detection of Microplastics in Water: A Novel Light Scattering Method Using Fluorescence Emissions	11	The Cambridge School High School	M. Mayne
Tsui	Andrew	SR	144	BCHM	Novel High-Throughput Screening and Identification of FDA-Approved Drugs for Alzheimer's Disease Treatment	11	Canyon Crest Academy	A. Siegel
Usher	Nicholas	SR	333T	EEMR	A Differentially-Geared, Omnidirectional Robotics Platform With Autonomous Jerk-Limited Navigation	11	High Tech High North County	C. Sailor
Vignevic	Jake	JR	642	CHEM	Measuring Protein and Vitamin C Level in Foods after Different Types of Cooking	7	St. Gregory the Great Catholic School	S. Dasgupta
Wang	John	SR	381	MCRO	Using Resazurin Assays for Screening Herbal Extracts with Antimicrobial Activity on Oral Streptococcus mutans	11	Canyon Crest Academy	E. Gerstin
Weiser	Menachem	JR	544	BEHA	Forward Engineering vs Reverse Engineering	8	San Diego Hebrew Day School	S. Jones
Wise	David	SR	287	EAEV	Testing Low-Budget Water Purification Methods for Rural Areas using Physical Models	11	St. Augustine High School	J. Brophy
Xiao	Tyler	SR	253T	COMP	Grow & Give	11	Del Norte High School	J. Cheskaty
Xiong	Nathan	SR	192	CHEM	Effective Separation of Fatty Acids Using COF Incorporated Epoxy Membranes	11	The Bishop's School	P. Reynolds
Xu	Kate	SR	289	EAEV	Reducing Lead Contamination Through Hydroponically-Grown Mycorrhizal Plants	10	Del Norte High School	B. West
Xu	Kayley	JR	686	COMP	Respiratory Sound Classification Using AI	8	The Bishop's School	J. Jordan

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Xu	Shirley	SR	249	COMP	Quantifying Size and Movement of Metal Organic Frameworks Using Computer Vision	12	The Bishop's School	M. Jaiclin
Zeller	Keanu	JR	764	EEMT	Tilt Angle Effects on Eddy Current Impacts	7	The Rhoades School	R. Hunker
Zhang	Jocelyn	SR	354	EEMT	Enhanced Photoluminescence Performance of Porous Silicon Quantum Dots for Bioimaging Application	11	Del Norte High School	F. Liao
Zwahlen	Maddie	JR	891	PROD	Comparing Extracted	7	St. Gregory the Great Catholic School	S. Dasgupta