Sunday, October 13, 2024 (8:30AM - 10:00AM EST)
In-Person Poster Session #1
Stata Center - Student Vest Street

Poster Title	Authors	Technical Track
Poster ID-005 Deaths of Despair in Virginia: Analyzing Socioeconomic Factors and Demographics	Filza Mutaal (Berea College)	Technology of Humanity
Poster ID-012 Quasiparticle Decay in Superfluid Helium	Marc Nichitiu (Brookhaven National Laboratory)	Technology of Engineering
Poster ID-013 THE ROLE OF MITOCHONDRIA IN THE DEVELOPMENTAL CYLCE OF OLIGODENDROCYTE PRECURSOR CELLS (OPCs)	Anne-Sarah Nichitiu (Dartmouth College)	Technology of Humanity
Poster ID-012 Data-Driven Modeling of Solar Inverters Using Neural Networks	Abigail Broscius (Rochester Institute of Technology)	Technology of Computation
Poster ID-104 Desmosomal Disruption in Desmoplakin Cardiomyopathy is Rescued by CRISPR-dCas9 Transcriptional Activation	Semanur H Ozemre (Stevens Institute of Technology)	Technology of Engineering
Poster ID-138 Estimating the Carbon Footprint of Small Language Models Powering Edge Device Applications	Pradyun Gaddam (Independent Researcher)	Technology of Sustainability
Poster ID-255 Habituation Learning in the Mimosa pudica plant as Inspiration for Robot Intelligence	Samhita Shriram (Princeton High School)	Technology of Computation
Poster ID-258 FOR POSTER: Increasing Global crop yield by enhancing Drought and Arsenic resistance in Oryza sativa by hyperexpression of aquaporin genes	Prisha Bhat (Plano East Senior High School)	Technology of Sustainability
Poster ID-260 Using Poisoned Data on Machine Learning (ML) Model DenseNet-121 Trained on Diabetic Retinopathy Eye Scans to Calculate the Threshold when the Severity of Poisoned Data Makes a ML Model Dangerous in Applications to Healthcare	Jayen Patel (Hillsborough High School)	Technology of Humanity
Poster ID-266 SYNTHESIZING NOVEL BISPECIFIC ANTIBODIES TARGETING CD40 AND CD137 RECEPTORS TO TREAT B-CELL MALIGNANCIES, THROUGH EXPLORATIONS OF DEEP LEARNING COMPUTATIONAL METHODS	Abbas Shakir (Tesla STEM High School)	Technology of Computation
Poster ID-267 Computational Simulation of First-in-Class Aptamer Mediated Tau Protein Inhibition in Alzheimer's Disease	Navneeth Badhri (Redmond High School)	Technology of Computation
Poster ID-270 Prevent Malicious Use of AI	Ethan Zhou (Massachusetts Academy of Math and Science at WPI)	Technology of Exploration
Poster ID-276 Using Emotion Recognition Models to Examine Pain Levels	Andrew Lu (Oyster River High School)	Technology of Humanity
Poster ID-282 Computational Simulations of Bispecific Aptamers for Ovarian Cancer Diagnosis	Vyom Sharma (Flower Mound High School)	Technology of Computation
Poster ID-283 Degradation of SARS-CoV-2 Main Protease Using First-in-Class PROTACs	Kavinayashri Chidambaranathan (Washburn Rural High School)	Technology of Computation

Sunday, October 13, 2024 (8:30AM - 10:00AM EST)
In-Person Poster Session #1
Stata Center - Student Vest Street

Poster Title	Authors	Technical Track
Poster ID-284 MASM Ghost Imaging for Quantum Antennas	**Skyler Bell** (Rensselaer Polytechnic Institute)	Technology of Networks
Poster ID-288 Using Large Language Models and Textual Processing to Analyze Parentally-Reported Food Reactivity Case Data	**Sean Nesamoney** (Stanford University)	Technology of Humanity
Poster ID-289 A Causal Survival Analysis of Transthoracic Echocardiograms on Patient Length of Stay	**Pranjal Rai** (The University of Texas at Austin); **Keanu Keopimpha** (California State University); **Lucy Teed** (University of Michigan)	Technology of Computation
Poster ID-301 AirChain: A Novel Blockchain Framework and Low-Cost Device for Democratized Air Quality Data Aggregation	**Samuel Stankiewicz** (Thomas Jefferson High School for Science and Technology)	Technology of Networks
Poster ID-305 Computational Analysis of CD28+ CAR T-cell Therapy for Cutaneous and Rare Melanoma Subtypes	**Yashna Singh** (Winter Springs High School)	Technology of Computation
Poster ID-306 PROFIND: Computational Framework to Generate PROTACs	**Anya Goel** (Livingston High School)	Technology of Automation
Poster ID-308 First Computational Simulation to Predict Inhibitors Against HILPDA Protein in Clear Cell Renal Cell Carcinoma (ccRCC)	**Rashmi Adulkar** (Neuqua Valley High School)	Technology of Computation
Poster ID-309 Identification of Potent Bifunctional Degraders for the p53 Oncoprotein through Integration of Artificial Intelligence and Molecular Dynamics Simulations	**Natalie Chen** (Bridgewater-Raritan High School)	Technology of Computation
Poster ID-315 Enhanced Computational Simulations of DuoBody Antibodies: Targeting B-Cell Malignancies for Innovative Treatments	**Shrinjoy Chaudhuri** (Monta Vista High School)	Technology of Computation
Poster ID-317 Accessibility of OSA Detection Devices in Underserved Communities	**Anne Chen** (William B. Travis High School); **Nola Chang** (Lamar High School)	Technology of Engineering
Poster ID-320 RAPID INSIGHT: AN EXPERT SYSTEM FOR ANALYZING AMPLI MULTIPLEX RAPID TESTS	**Matheus Nascimento Berbet** (University of Massachusetts Boston)	Technology of Automation
Poster ID-323 {Optimal Experiment Design and Image Reconstruction using Generative Methods	**Spiros K Manolas** (Stony Brook University); **Anish Mitagar** (University of Massachusets Amherst)	Technology of Computation
Poster ID-331 A NOVEL CRYPTOGRAPHIC CIPHER INCORPORATING TRANSFORMATIVE GEOMETRY IN THE COMPLEX PLANE	**Krish Patel** (Manalapan High School)	Technology of Networks
Poster ID-332 Machine Learning Approach to Time-Series Analysis of SARS-CoV-2 Spike Glycoproteins Under Varying pH and Temperature Conditions	**Parth Jain** (Stony Brook University)	Technology of Computation
Poster ID-334 Design and Development of an Electronic Wild Animal Repellent Device for Fruit Farms	**Vincent Liu** (Fayetteville-Manlius High School)	Technology of Sustainability

Poster Title	Authors	Technical Track
Poster ID-335 **Compact Surgical Navigation via Tool-Mounted Approach: Overcoming Line-of-Sight Limitations in Minimally Invasive Procedures**	**Christopher Cao** (Union County Magnet High School)	Technology of Humanity
Poster ID-338 **Leveraging Machine Learning to Improve Tumor Segmentation in Preclinical Cancer Studies**	**Riya Jain, Abir A Modak** (Princeton University)	Technology of Automation
Poster ID-340 **Benchmark Study on Effects of Fixed Volatility Hyperparameter on State Space Model Learning Curve Dynamics**	**Isabel Hong, Xinyue Gong,Elaine Cui** (Boston University RISE); **Abigail Mello** (Denver South High School); **Shaleen Thaker** (Irvington High School)	Technology of Automation
Poster ID-341 **HIGH TEMPERATURE GAN ELECTRONICS TO UNLOCK THE POTENTIAL OF GEOTHERMAL ENERGY**	**Can Jiang** (Massachusets Institute Technology)	Technology of Sustainability
Poster ID-343 ScriptGAN: A Therapeutic Tool for Preserving and Replicating Handwriting Using Generative Adversarial Networks in Neurodegenerative and Learning Disorders	**Akshat Santhana Gopalan** (John P. Stevens High School)	Technology of Humanity
Poster ID-345 **Optimal M4 Zeroing**	**Aidan Looney** (United States Military Academy)	Technology of Engineering
Poster ID-422 **Computational Molecular Docking Simulations of Aptamers Targeting CD30 in the Treatment of Hodgkin Lymphoma**	**Rehman Arif** (Depaul University)	Technology of Computation
Poster ID-471 **Autism Spectrum Disorder Diagnosis Using Implementation of Variational Quantum Deflation Algorithm**	**Anthony Kim** (Bergen County Academies)	Technology of Humanity

	Sunday, October 13, 2024 (10:30AM - 12:00PM EST) In-Person Poster Session #2 Stata Center - Student Vest Street		

Poster Title	Authors	Technical Track
Poster ID-348 MODELING DISTRIBUTED MULTIMODAL ROUTING NETWORKS IN CONTESTED ENVIRONMENTS	**Jack Hernon** (United States Military Academy)	Technology of Computation
Poster ID-349 Efficient Processing of Image Sequences with Krylov Subspace Recycling	**Srijon Sarkar** (Emory University); **Clara Armstrong** (Stony Brook University); **Olivia Kallay** (Vassar College)	Technology of Computation
Poster ID-350 Testing Neutrino Tomography as a Tool to Explore Deep Earth Properties	**Shreyas Nair, Shourya Chhabra** (Union County Magnet High School)	Technology of Engineering
Poster ID-352 Revolutionizing Bone Scaffolding Material	**Ujjwal Rameshwaram** (Stevens Institute of Technology)	Technology of Engineering
Poster ID-353 Translate Human Emotion Features at Minimum Free Energy Spectrum to EEG Wavelet with CHATGPT- 4 Conversion	**Ricky Le** (Fitchburg State University)	Technology of Engineering
Poster ID-354 Machine Learning for 2D Magnetization Reconstruction From 3D Vector Magnetic Images	**Logan Maroclo** (University of Maryland)	Technology of Computation
Poster ID-355 AlphaFold Through the Lens of PINK1	**Rhea Bachani** (Stevens Institute of Technology)	Technology of Automation
Poster ID-356 NEERU: MAKING WATER BOTTLES SMART	**Kunal Mankodiya, Yashwant Ponnaganti** (University of Rhode Island	Technology of Engineering
Poster ID-357 Improved Fermi Gamma-ray Source Classifications with SRG/eROSITA X-ray Counterparts using Machine Learning	**Jaymin Ding** (Rye Country Day School)	Technology of Exploration
Poster ID-358 Using Assistive Technology to Solve Mobility and Congestion Challenges	**Maharin Khondoker** (New York City College of Technology)	Technology of Humanity
Poster ID-359 Using Near-Peer Mentoring to Improve Student Success in STEM	**Kai Schropfer** (Sidwell Friends School)	Technology of Humanity
Poster ID-360 WoundGuard	**Jessica Woyton** (Wentworth Institute of Technology)	Technology of Engineering
Poster ID-362 Diagnosing Bias: Predictive AI Models for Identifying Biased Health Information in Medical Curriculum	**Pegah Emdad** (Worcester Polytechnic Institute); **Jethro Lee** (Northeastern University)	Technology of Computation
Poster ID-363 AI-Based Noninvasive Techniques for Assessing Pain in Alzheimer's Patients with Communication Limitations	**Wei Lu** (Keene State College/USNH)	Technology of Humanity
Poster ID-364 Testing accuracy of integration of NLP application (ReqFusion) for Air Operation Command	**Vivek Kakarla** (Independence High School); **Ishika Chelpati** (Lightridge High School); **Aayan Repala** (Rock Ridge High School); **Mihai Boicu** (George Mason University)	Technology of Automation

	Sunday, October 13, 2024 (10:30AM - 12:00PM EST) In-Person Poster Session #2 Stata Center - Student Vest Street		Massachusetts Institute of Technology

Poster Title	Authors	Technical Track
Poster ID-366 Brain Tumor Classification Using CNNs	**Christopher Yang** (The Lawrenceville School)	Technology of Computation
Poster ID-367 The Effects Of Music-Induced Nostalgia On Healthy Aging	**Eliana Sun** (West Windsor-Plainsboro High School North)	Technology of Humanity
Poster ID-368 Pose Estimation Overlay for Medical Diagnosis	**Suhani Sengupta** (Edison Academy Magnet School)	Technology of Automation
Poster ID-372 Optimizing COVID-19 Sewage Surveillance by Mixed-Integer Linear Programming	**Kristy Luk** (Hong Kong International School)	Technology of Computation
Poster ID-374 Sensory Space: Navigating Data Accessibility for Disabled Individuals through Yelp Web Scraping	**Zoe Niesen** (Belmont University)	Technology of Computation
Poster ID-383 AI Mental Health Monitoring and Alert System using EEG-based Emotion Detection	**Larine Ouyang** (Athinoula A. Martinos Center, Massachusetts General Hospital)	Technology of Automation
Poster ID-390 Benchmarking and Workload Analysis of Assistive Robot Motion Planning	**Julyssa Villa Machado** (Boston University)	Technology of Humanity
Poster ID-394 Deep Learning-Powered GUI Imaging System for Automated Segmentation and Classification of Legume Nodules	**Chijioke Ihejirika, Donato Leon** (California State University- Chico)	Technology of Automation
Poster ID-395 Harnessing Machine Learning and Large Language Models for Systematic Reviews: A Case Study in Genetics and Physical Activity	**Jake Beckman** (West Point)	Technology of Automation
Poster ID-398 Utilizing a Novel VAE Pipeline for Tau Inhibitor Screening Validated in Drosophila Melanogaster Alzheimer's Models	**Prisha Rai** (High Technology High School)	Technology of Computation
Poster ID-400 Particle Dynamics in Magnetic Fields: Applications for Space Debris Mitigation	**Karma Bridgman** (Dubai College)	Technology of Exploration
Poster ID-408 Autonomous System Infrastructure	**Suhani Sengupta** (Edison Academy Magnet School)	Technology of Humanity
Poster ID-410 A Comparative Evaluation of the Predictive Performance of Artificial Neural Networks and Item Response Models for Educational Item-Level Heterogeneous Treatment Effects	**Daniel Mahany, Sanjit Kakarla** (Hightstown High School); **Lucas Yanney** (Ranney School)	Technology of Humanity
Poster ID-411 ANALYZING PM2.5 TRENDS WITH AIR MONITORS	**Nell Neary** (University of Massachusetts Lowell)	Technology of Engineering
Poster ID-414 Improving infectious disease predictions through the use of metapopulation SIR modeling and graph convolutional neural networks	**Petr Kisselev** (Thomas Jefferson High School for Science and Technology)	Technology of Humanity

Sunday, October 13, 2024 (10:30AM - 12:00PM EST)
In-Person Poster Session #2
Stata Center - Student Vest Street

Massachusetts
Institute of
Technology

Poster Title	Authors	Technical Track
Poster ID-418 **3D Printed Driver Gear of a Morphobot**	**Shreyan Dahiya** (Needham High School)	Technology of Engineering
Poster ID-419 **Continuous Interleaved Sampling Based Sound Processing Strategy For An Auditory Brainstem Implant**	**Weiyi Zhang** (University of Connecticut)	Technology of Humanity
Poster ID-420 **Observing Phase Changes in n-hexane from 0 to 12 GPa**	**Abhishek Terala** (Edison Academy Magnet School)	Technology of Engineering
Poster ID-423 **Neighborhoods within the City: Identification of Galactic Stellar Clusters Using Unsupervised Learning Algorithms**	**Julia Holmes** (Stanford University Online High School)	Technology of Exploration
Poster ID-426 **Integration and Optimization of Cu2O and TiN Nanoparticles for Enhanced Solar Cell Performance**	**Kriti Srivastava** (High Technology High School)	Technology of Sustainability

Sunday, October 13, 2024 (1:00PM - 2:30PM EST)
In-Person Poster Session #3
Stata Center - Student Vest Street

Poster Title	Authors	Technical Track
Poster ID-261 **Analyzing Home Purchasing Disparities in the U.S.: A Census-Based Study of Imbalance and Trends**	**Ching-yu Huang** (Kean University)	Technology of Computation
Poster ID-264 **US Utility Rate Disparity Analysis**	**Ching-yu Huang** (Kean University)	Technology of Sustainability
Poster ID-333 **Predictive Modeling and Improved Diagnosis of ADHD Comorbidities in Autism Spectrum Disorder Using Machine Learning**	**Alaina Shinde** (Edison High School)	Technology of Computation
Poster ID-430 **Enhanced Modeling of Harmful Algal Blooms (HABs) using Scientific Machine Learning**	**Kaizar Rangwala** (Hopkinton High School)	Technology of Sustainability
Poster ID-432 **AUTONOMOUS CONTACT DETECTION MODULE FOR INTERACTION LABELING IN SURGICAL ROBOTICS DATASETS**	**Mai Bui, Natalie Chalfant** (Mount Holyoke College)	Technology of Humanity
Poster ID-438 **Improving Tropical Cyclone Forecasts Using Machine Learning on Different Ensemble Combinations**	**Abhay Bhaskar** (Middlesex County Academy for SMET)	Technology of Engineering
Poster ID-440 **Molecular Dynamics Study of Interfacial Interaction Between Perfluoroalkyl Substances and the Lipid Bilayer Membrane**	**Deniz Gursoy** (Fayetteville-Manlius High School)	Technology of Computation
Poster ID-443 **Long Term Gastric Resident Device**	**Eleanor Jaffe** (Massachusetts Institute Technology)	Technology of Humanity
Poster ID-444 **SIEVE eviction for the CPU**	**Rishav Chakravarty** (Dartmouth College)	Technology of Computation
Poster ID-447 **Visualizing Stellar Evolution and Interiors in 3D**	**Kira McCracken** (Lafayette College)	Technology of Humanity
Poster ID-449 **Supervising Structural Damage Classification with Gaze Data**	**Charlotte Liu** (Ridge High School)	Technology of Automation
Poster ID-450 **Model of Microwave Plasma for Electromagnetic Simulations: Steps Towards Experimental Verification**	**Camille Williams** (Worcester Polytechnic Institute	Technology of Engineering
Poster ID-452 **Optimizing Wing Design for Maximum Lift-to-Drag Ratio using OpenVSP**	**Nareshsanjay Muthukumar** (Manalapan)	Technology of Engineering
Poster ID-453 **A Novel Algorithm to Identify and Eradicate Protozoan Parasites in Aquatic Environments using Convolutional Neural Networks and a NLP API**	**Ryan Edwards** (Manalapan High School)	Technology of Computation
Poster ID-455 **Developing Sustainable Smart Cities: The Living Bright Model's Impact on Quality of Life in Tabuk City, Saudi Arabia**	**Hussam Alsubhi** (University of Tabuk)	Technology of Sustainability

	Sunday, October 13, 2024 (1:00PM - 2:30PM EST) In-Person Poster Session #3 Stata Center - Student Vest Street		Massachusetts Institute of Technology

Poster Title	Authors	Technical Track
Poster ID-456 Gradient Approximation Based Slice Finding for Debugging Machine Learning Models	**Michael Flynn** (University of Rochester)	Technology of Computation
Poster ID-459 Using Optogenetics to correct the DRP1-K38A mutation to prevent onset of Parkinson's Disease	**Glynnis Leong, Arsheen Seehra, Nivashini Nattudurai, Unnati Seshadri (VIRTUAL)** (James Logan High School)	Technology of Engineering
Poster ID-465 Run to Run Quality Optimization for FDM Printing with Machine Learning for Manufacturing at Scale	**Alexander Lee, Anthony Wang** (Northeastern University)	Technology of Computation
Poster ID-466 Utilizing Quantum Variational Circuits to perform Quantum Convolutions in Hybrid "Quanvolutional" Neural Networks for Skin Cancer Detection	**David Liang** (Westwood High School); **Idhant Gode** (Thomas S. Wootton High School)	Technology of Humanity
Poster ID-467 Astrophysical Insights: Age and Distance Analysis of NGC 4815	**Sriya Veluri** (South Brunswick High School); **Abhay Bhaskar** (Middlesex County Academy for SMET)	Technology of Exploration
Poster ID-468 SNAKE: Smart Navigational Adaptive Kinematic Exploration - An Effective Locomotion of Multi-Terrain Pneumatic Muscle-Driven Modular Soft Robot	**Samhita Pokkunuri** (Old Bridge High School)	Technology of Exploration
Poster ID-473 LISAM: A NOVEL SOLUTION TO LOW-IMPACT SURVEILLANCE AND MODIFICATION	**Dan Joel Sahaya Stanis Kennedy** (Lebanon Trail High School)	Technology of Automation
Poster ID-474 MACHINE LEARNING FOR FRAGMENT BASED CANCER DRUG DISCOVERY	**Nisarg Shah** (Del Norte High School); **Anya Taneja** (Saratoga High School); **Anushka Punjabi, Kennard Liong** (Aspiring Scholars Directed Research Program)	Technology of Humanity
Poster ID-477 Iteration and Implementation of Area Classification AI for Enhancing Civil Development	**Naisha Bhandari** (NASA SEES)	Technology of Sustainability
Poster ID-485 Genomic Analysis for Lymph Node Metastasis Prediction in Breast Cancer Patients	**Jiya Singla** (Herberger Young Scholars Academy)	Technology of Humanity
Poster ID-490 Crack Detection in LPBF Additive Manufacturing Using Three Dimensional COMSOL Simulation	**Rui Han Huang** (Collingwood School)	Technology of Engineering
Poster ID-491 OPTIMIZING AGRICULTURE PRODUCTIVITY: LEVERAGING SOIL MOISTURE MONITORING & PRECISION IRRIGATION	**Blake Crawford** (Tennessee State University); **Chukwuemeka Okwuka** (City College of New York); **Donovan Collazo** (Rowan University)	Technology of Computation
Poster ID-492 A Model of Risk for Cesarean Delivery Based on Maternal Comorbidities	**Preston Schmittou, Quan Huynh** (Woodson High School)	Technology of Humanity
Poster ID-495 Enhancing Dental Care: Automated 3D Reconstruction for Self-Diagnosis and Prosthetic Generation	**Yongjun Lee** (SUNY Buffalo State University)	Technology of Automation
Poster ID-500 Quantum Annealing for Optimizing Cisplatin-Based Drug Discovery: A Synergistic Approach to Receptor-Ligand Binding	**Diya Vatsavai** (Valley Christian High School); **Venkata Shaurya Mantrala, Swayam Shah** (Enlore High School); **Devang Pandey** (Fairview High School)	Technology of Computation

Sunday, October 13, 2024 (1:00PM - 2:30PM EST)
In-Person Poster Session #3
Stata Center - Student Vest Street

Poster Title	Authors	Technical Track
Poster ID-504 **MT-MOE: Protein-Specific Drug Design Utilizing Mixture of Experts Transformers**	**Hubert Hsu** (Sanger High School); **Bethany Ray** (Sanger High School)	Technology of Computation
Poster ID-506 **Identification of Novel Therapeutic Pathways in Crohn's Disease Through RNA-Seq and PPI Network Analysis**	**Sree Ishan Kolukula** (Paradise Valley High School)	Technology of Humanity
Poster ID-508 **Acid and Alkaline Modified Biochars for Short-Chain PFAS Removal**	**Faith Fei Qin** (Princess Anne High School); **Alisha Singh** (Old Dominion University)	Technology of Engineering
Poster ID-510 **Using Assistive Technology to make Educational Games more Accessible for Users with Mobile Impairments**	**Christal Jean-Soverall** (New York City College of Technology)	Technology of Engineering

Sunday, October 13, 2024 (8:30AM - 10:30AM EST) VIRTUAL Poster Session Stata Center 32-141 (Rui Ma)

Poster Title	Authors	Technical Track
Poster ID-029 (VIRTUAL) Using AI Algorithms to Replicate Gadusol Found in Danio rerio in Human Genetics	**Aryaa Sharma, Andrew Chen, Ishita Sengar** (Thomas Jefferson High School for Science and Technology)	Technology of Automation
Poster ID-112 (VIRTUAL) Developing a Low-Cost Temperature Logger for the Shipment of Cryopreserved 3D Scaffolds	**Irene Lamperti** (Mount Holyoke College)	Technology of Engineering
Poster ID-163 (VIRTUAL) Seismic Analysis of Antarctic Ice Sheet Thickness Using Horizontal-to-Vertical Spectral Ratios	**Faye Hsu** (San Francisco University High School)	Technology of Exploration
Poster ID-251 (VIRTUAL) Accelerating Diagnosis of Hypersensitivity Reactions with Deep Learning Decoder-Encoder Neural Networks and Cost Engineering	**Kenneth Lin** (International Research Society)	Technology of Humanity
Poster ID-257 (VIRTUAL) An Adaptive Dynamic Robotic Brace for Personalized Spinal Deformity Treatment	**Minran Wang** (Culver Academies)	Technology of Engineering
Poster ID-265 (VIRTUAL) Words That Shape the World: A Novel Sentiment Analysis Approach to Quantifying Polarization from U.S. President Rhetoric on Immigration	**Simon Farruqui** (Milton Academy)	Technology of Automation
Poster ID-271 (VIRTUAL) Transformers for Astronomical Transients Classification	**Olivia Guo** (Montgomery Blair High School)	Technology of Exploration
Poster ID-275 (VIRTUAL) Tracking Edge Devices: Developing A Computationally Efficient Indoor Localization System	**Arjun Samavedam** (Montgomery Blair High School)	Technology of Automation
Poster ID-285 (VIRTUAL) CRAFT (Complete Reduction to Amplitude-Frequency Table) – A Pioneering Approach for Quantitatively Analyzing Inflammatory Biomarkers in Complete Horse Serum 1D NMR Spectra	**Christina Metaxas** (Princeton University)	Technology of Computation
Poster ID-291 (VIRTUAL) A Machine Learning-Based Approach for Classification of SARS-CoV-2 RNA Sequences	**Santosh Patapati** (University of Washington)	Technology of Computation
Poster ID-300 (VIRTUAL) Model Building for Prediction of Valuation of Growth Stocks	**LIning Yang** (Culver Academies)	Technology of Computation
Poster ID-311 (VIRTUAL) AI Equity: Systematic Assessment of Large Language Models' Correctness and Biases for Minority Health	**Radia Lu** (Blacksburg High School)	Technology of Humanity
Poster ID-313 (VIRTUAL) Analysis of Patterns in Human Focus from Different Audio Stimuli	**Anissa Li** (California Online Public High School)	Technology of Humanity
Poster ID-329 (VIRTUAL) Register Aggregation for Hardware Decompilation	**Varun Rao** (Mission San Jose High School)	Technology of Engineering
Poster ID-339 (VIRTUAL) Multiwalled CNT Based Resistive Strain Sensors	**Eric Zhang** (Diamond Bar High School)	Technology of Humanity

Sunday, October 13, 2024 (8:30AM - 10:30AM EST) **VIRTUAL** Poster Session **Stata Center 32-141 (Rui Ma)**		

Poster Title	Authors	Technical Track
Poster ID-342 (VIRTUAL) Mapping Ground-Level Ozone Pollution With Remote Sensing and Machine Learning	**Purva Marfatia** (Cupertino High School)	Technology of Exploration
Poster ID-376 (VIRTUAL) Predicting Coral Reefs' Survivability using Machine Learning	**Tiffany Zhu** (The Harker School)	Technology of Sustainability
Poster ID-379 (VIRTUAL) Simulating Closed-Loop Acoustic Stimulation in Slow-Wave Sleep: A Machine Learning-Based EEG Approach for Cognitive Improvement	**Yingshan Wang** (Massachusetts Institute of Technology)	Technology of Humanity
Poster ID-382 (VIRTUAL) Application of Reasoning Agents to Enhance Subject Performance in Large Language Models	**Arnav Kumar, Nathan Man** (ASDRP); **Samarth Prajapati** (Archbishop Mitty High School); **Ryan Li** (BASIS Independent Fremont)	Technology of Automation
Poster ID-384 (VIRTUAL) Application of Deep Learning Method on Diagnosis of Histopathology-based Oral Squamous Cell Carcinoma	**Yanjun Chen** (Palos Verdes Peninsula High School)	Technology of Computation
Poster ID-386 (VIRTUAL) Coating of Zinc Oxide Nanoparticles with Titanium Dioxide for Optimal Photocatalysis Degradation of Aqueous Simazine	**Andrea Fletes** (Vanderbilt University)	Technology of Sustainability
Poster ID-412 (VIRTUAL) A framework for music-based therapy that utilizes a Music-Mood model and Bert NLP	**Aaditya Bharadwaj** (Enloe High school)	Technology of Humanity
Poster ID-417 (VIRTUAL) Automated Early Detection of Diabetic Retinopathy Using Deep Learning	**Ishani Singh** (High Technology High School)	Technology of Computation
Poster ID-427 (VIRTUAL) Denoising Biomedical Images using Weakly Supervised and Self Supervised Deep Learning Methods	**Reeti Rout** (John P. Stevens High School)	Technology of Computation
Poster ID-509 (VIRTUAL) DeepBrain: A Convolutional Neural Network Based Pipeline For Multiclass Classification of Brain Tumor MRI Images	**Ziyao Cheng** (Palos Verdes Peninsula High School)	Technology of Automation