KESHAV NARANG
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EDUCATION

GPA: 3.95U, 4.75W | ACT: 36 | PSAT: 1520
Completed 20 APs and 13 University-Level Courses

Stanford Online High School Redwood City, 2020 – 2024
Basis Independent Silicon Valley San Jose, 2020 – 2021

LEADERSHIP EXPERIENCE

GreenTeamPower – Founder and President

- 501(c)(3) nonprofit organization (https://greenteampower.org) dedicated to empowering 500+ youth with graduate-level scientific knowledge of renewable technologies and detailed understanding of active legislative bills to advocate effectively for climate action.
- Coordinated over 20 workshops in schools and libraries and launched 15 public commenting projects across seven chapters to advance renewable energy education and advocacy in youth.
- Co-sponsored rallies with Youth vs Apocalypse, Acterra, and ClimateHealthNow, and co-organized annual conferences and summits with Silicon Valley Youth Climate Agency and East Bay Clean Energy. GreenTeamPower uniquely offered detailed technical analysis of current legislation accessibly.
- Developed "The EcoPolicyAdvocate," an innovative tool to automatically monitors renewable energy-related bills at regional, state, and national levels. The website uses Artificial Intelligence to summarize key technical details and generate public commenting templates and is currently being beta tested by various organizations in the Bay Area, including the Sierra Club
- Authored and published *Keeping Our Planet Green: A Young Scientist's Perspective on Environmental Stewardship*, a book that shares a comprehensive understanding of climate science and its impacts, and actionable strategies for reducing both individual and corporate carbon footprints. This book also incorporates stories and insights from GreenTeamPower's podcast featuring research and policy experts.

ASK Solar Panel LLC – Co-Founder & Chief Technology Officer (CTO)

- Renewable energy startup (https://asksolarpanel.com) specializing in creating solar cells with energy storage functionality. Won Conrad Challenge in Energy & Environment Division (Pete Conrad Scholar)
- Led the design of the flagship innovation in Autodesk Fusion, created corresponding app (PowerPlanner) in Swift, and optimized automatic charging and discharging cycles with COMSOL
- Awarded a market study valued at $1,500 from the Wisconsin Innovation Service Center (WISC)
- Received $20,000 in *pro bono* support from Arent Fox for patent pending application (63/456519) focusing on TiO_2/WO_3 nanotube-enhanced electrochromic supercapacitor integration with perovskite.

Renewable Energy Club – Founder and President

- Organized collaborative research on renewable technologies and conducted Health, Environmental, and Economic, Impact Assessments for active case studies such as banning Natural Gas from Bloom Energy
- Awarded $500 from EarthForce to lead a public commenting event against the Mountain Valley Pipeline

VEX Robotics Team (11101B) – Software Engineer

- Created autonomous robot movement and auto-aim mechanism using computer vision in Java.
- 2023 VEX Robotics World Champions – Won 1st in World Championship and Design Award in States

Artificial Intelligence Club – Founder and President

- Created educational resources on topics ranging from Sound Classification to Generative AI. Mentored 50+ students and organized schoolwide datathon sponsored by Women in Data Science (WiDS)
- Invited distinguished guest speakers including Jacy Reese Anthis, co-founder of Sentience Institute, who addressed Artificial Intelligence Safety and Ethics, and Andrew Carr, a researcher from OpenAI, Google Brain, and Lyft, who shared insights on the intersection of Artificial Intelligence and business.

Leadership and Activism Club – Co-Founder and President

- Initiated a workshop series inspired by Davidson Ambassador Program to provide support on crafting a mission statement, stakeholder analysis, media literacy, and forming partnerships for youth nonprofits.
- Partnered with Feeding America to donate 25,000+ meals during COVID-19 in 2021. Partnered with Caitlin's Smiles to write personalized notes and make origami kits for children with cancer in 2022.

Science Bowl – School Co-Captain

- Oversaw outreach, recruitment, training, travel, and financials for National Science Bowl school team.
- Organized schoolwide tournament and will be in Stanford Linear Accelerator (SLAC) Tournament.

Wharton Global High School Investment Competition – Chief Technology Officer

- Created an Artificial Intelligence model to study market trends and investment options for our client. Managed portfolio and implemented investment strategies to align with client goals and constraints.

Exoplanet Research Seminar - President

- Conduct summer workshops (https://exoplanetresearch.com/) to support citizen scientists from across the world analyze data from Qatar 1-b and publish findings in the American Association of Variable Star Observers (AAVSO) in collaboration with NASA's Exoplanet Watch.

Foodi – Co-Founder

- Created an iOS app using Swift to scan the barcode of food products and determines if it meets the user's dietary restrictions while tracking caloric consumption. Our team was sponsored by LaunchX

SmartWeight – Co-Founder

- Engineered dumbbells that can change weight and track biometric data. Sponsored by iStartValley

Student Government – Board Chair Liaison

- Coordinated schoolwide events, facilitated club collaborations, and authored newsletter

Data Science – Teaching Assistant

- Host weekly office hours to mentored students in Data Science (OM065)

MATHCOUNTS – Scholarship Application Reviewer

- Reviewed and offered scholarships to MATHCOUNTS alumni at underserved middle schools.

Tutor

- Taught AP Physics 1, AP Computer Science A, and AP Calculus BC at UPchieve, Schoolhouse, Magic2STEM, NorthSouth Foundation, and the Milpitas Library**.** Helped nonprofits democratize access to education by creating structured lesson plans, making slides, and tutoring 500+ students over 4 years.

WORK EXPERIENCE

Stanford University, Gevaert Labs June 2023 – Present

Researcher, Advisors: Alexander Henry Thieme MD, Eric Yuanning Zheng PhD

- Selected as 1 of 50 research students from Stanford Institutes of Medicine Summer Research Program (SIMR) and awarded a stipend from the Strober Family Fund
- Developed a foundational multi-modal AI model for image-to-text classification (to be published)

RESEARCH EXPERIENCE

Stanford University, Bhalla Labs August 2023 – Present

Student Intern, Advisor: Vivek Bhalla MD

- Used R to computationally analyze genomic data to study the role of ESM-1 in Diabetic Kidney Disease

Stanford Online High School, Writing and Tutoring Center

Student Researcher, Advisor: Dr. Rebecca Shields, Dr. Victoria D'Urso August 2023 – April 2023

- Collaborated with Stanford OHS Writing Center to conduct and analyze survey responses from instructors, tutors, and tutees to investigate informal learning platforms in school ecosystems
- Presented *at The Secondary School Writing Centers Association (SSWCA)*; to be published in *The Journal of Peer Tutoring in Secondary Schools*

Independent Research August 2022 – June 2023

Student Researcher, Advisor: Madhav Subramaniam

- Conducted computational analyses, including Differential Gene Expression and Gene Set Enrichment Analyses, to identify novel markers for resistance to first-line therapy in metastatic renal cell carcinoma.
- Awarded 1st in Bioinformatics and Computational Science category at Alameda County Science & Engineering Fair (ACSEF) in 2023. Invited to present at California State Science and Engineering Fair.

Independent Research August 2021 – May 2022

Student Researcher, Advisor: Kalee Tock

- Computationally analyzed data from Harvard and Smithsonian MicroObservatory using ExoPlanet Transit Interpretation Code to validate the radius and transit timing variations of exoplanet HAT-P-36 b
- Presented findings at the Robotic Telescope, Student Research, and Education conference and was awarded 2nd in Astronomy and Astrophysics at the Alameda County Science & Engineering Fair in 2022

PUBLICATIONS

1. *MedFM: A Transformer-Based Foundational Model for Image Classification using Transfer Learning* (awaiting publication)
2. *Leveraging Data to Create an Inclusive Center: What Happens When Writing at the Center is Not at The Center?* (awaiting publication)
3. *Investigating Prognostic Molecular Cues for Sunitinib in Renal Cell Carcinoma. The Role of Interleukin-13 in Sunitinib Resistance* (awaiting publication)
4. *The Position Angle, Separation, and Additional Component of STF 1300* (Journal for Double Star Observations)
5. *Exploring Short Period Red Dwarf Binaries in the Solar Neighborhood Speckle Interferometry and Gaia – IV* (Journal for Double Star Observations)

RESEARCH CONFERENCES

- American Academy of Environmental Engineers and Scientists Autumn Summit (2023)
- Sigma Xi International Forum on Research Excellence (IFoRE) (2023)
- Writing at the Center: The Secondary School Writing Centers Association (SSWCA) and Northern Virginia Writing Project (NVWP) Conference (2023) (Agenda)
- Society for Astronomical Sciences Annual Symposium (2022) (Proceedings)
- Robotic Telescopes, Student Research, and Education Conference (2022) (Agenda)

AWARDS

- Conrad Challenge 2023 Pete Conrad Scholar – 1st in Energy & Environment (Team ASK)
- VEX Robotics 2023 World Championship – World Champion – 1st Place Winner (Team 11101B)
- World Science Scholar – 1 out of 55 scholars selected worldwide
- Davidson Institute Young Scholars Ambassador – 1 of 13 students selected nationally
- National Merit Semifinalist – 1520/1520 on PSAT
- National Latin Exam – Gold Medal
- Presidential Volunteer Service Award – Gold Medal
- American Invitational Mathematics Exam (AIME) – Qualifier
- United States Computing Olympiad (USACO) – Silver Qualifier
- The Knowledge Society – 1 of 4 Pete Conrad Scholars selected for full-ride ($7,000) scholarship
- Science Olympiad States Qualifier: 15+ medals in Regional and State Competitions
- "You Be the Chemist" State Qualifier: 1st Prize in School and 2nd Prize in States
- Stanford OHS Hack the Climate Challenge: 1st Prize in School Hackathon for Climate Challenge
- AP Scholar with Distinction (2020 – 2023)