



Krish Pai

Senior in High School

Krish Pai is currently immersed in his academic journey at Canyon Crest Academy in San Diego, CA, where his commitment to excellence is evident through his engagement in advanced placement courses such as AP Calculus, AP Chemistry, and AP Environmental Science. With a projected graduation in June 2025, he maintains an exemplary grade point average of 4.0 to 4.5. His academic curiosity extends beyond the classroom to the University of Southern California in Los Angeles, where he collaborates with a team at the Stevens Neuroimaging and Informatics Institute. This institute is renowned for its pioneering research in computational neuroscience and artificial intelligence, aiming to unravel the complexities of human brain development and its deviations caused by diseases or trauma.

Research Endeavors and Innovations

Since 2022, Pai has actively contributed to cutting-edge research within USC's Machine Learning and Computational Neuroscience department. His research employs artificial intelligence and machine learning techniques to explore the intricate relationships between structural and functional brain changes in various states—natural development, disease, and recovery. His engagement with such advanced topics at a young age underscores his deep interest and burgeoning bioscience expertise.

Academic Excellence and Leadership

Krish Pai's academic prowess is consistently demonstrated by his high performance and leadership in various capacities. He was accepted into the prestigious University of California COSMOS program in 2022—a highly selective summer initiative to advance knowledge in STEM fields among talented students. Within this program, he tackled increasingly complex challenges, enhancing his understanding of scientific applications in today's technologically driven world.

Scholarly Contributions and Initiatives

Among his notable academic achievements, Pai was the first author at the American Epilepsy Society Research Conference, where he presented a significant piece of research funded by a competitive stipend from the AES and the USC Bridge Institute. This research explored innovative applications of AI in studying neurological disorders, particularly epilepsy. Furthermore, he founded and presided over the San Diego Chapter of the Test of

Engineering Aptitude in Math and Science (TEAMS), guiding over 35 members and fostering a competitive yet collaborative environment for tackling real-world engineering problems.

Participation in National Research Programs

His role extends into national research through participation in the National Science Foundation-funded Epilepsy Bioinformatics Studies for Antiepileptogenic Therapy. Here, he was instrumental in developing a machine learning application designed to identify potential biomarkers of epilepsy following traumatic brain injuries, showcasing his ability to contribute significantly to complex, multi-faceted research projects.

Extracurricular Achievements and Innovations

Outside the classroom, Pai's enthusiasm for science and technology has driven him to remarkable achievements in various competitions. He secured 6th place in Northern California's statewide Science Olympiad Competition. He was a top finalist in numerous other prestigious contests, including the San Diego Science and Engineering Fair, where his project in Computational Biology won first place. These accolades highlight his practical application of theoretical knowledge and ability to excel under competitive pressure.

Personal Interests and Skills

On a personal note, Pai harbors a deep-seated passion for the life sciences, mathematics, and emerging technologies, particularly their potential to revolutionize disease diagnosis and treatment. He is proficient in programming languages such as HTML, Python, and JavaScript and is skilled

in using engineering software like MATLAB. His engagement with both Wet Lab and Dry Lab procedures from an early age reflects his hands-on approach to learning and his enthusiasm for scientific discovery.

A Lifelong Learner and Innovator

A relentless pursuit of knowledge and innovation characterizes Krish Pai's life. He is self-taught in many advanced scientific disciplines, from computer programming to the life sciences. His home is often a personal laboratory, where he conducts experiments and develops projects that further his understanding and capabilities in addressing human health challenges. His profound curiosity and analytical skills have been evident since childhood, showcased through his insightful essays and projects that often reveal a unique perspective on seemingly ordinary subjects.