BRANDON GUO

https://bguo.us

EDUCATION

Monta Vista High School *August 2016 - Present*
Weighted GPA: 4.67; Unweighted GPA: 4.00/4; ACT: 36/36
SAT Mathematics Level II: 800, SAT Physics: 800, SAT Literature: 740

School Coursework (AP): Calc BC; Physics 1/2/C-M/C-EM; Statistics; Eng. Lang.; Comp Sci A; Chinese [5] Eng. Lit., French, Macroeconomics, US Gov/Politics, Chemistry [taking exam 2020]

College Coursework (Concurrently): MATH4B: Differential Equations, MATH4C: Linear Algebra, ENG1A: English Composition, CS3A: OOP with Python, PHIL004: Philosophy, MATH4A: Multivariable Calculus

RESEARCH EXPERIENCE

Research Intern in Nadeau Lab at Stanford School of Medicine *May 2019 - Present*
Proposed the first analysis pipeline that leverages graph theory along with techniques of weighted network analysis and effect size tests to identify disturbed gene-gene and gene-transcript interactions in asthma. Perform research pipeline R using Amazon Cloud Services to handle big data.
Publication (B Guo, A Kaushik, KC Nadeau): A robust pipeline for gene interaction identification in asthma
Publication Status: Pending

Research Intern in San Jose State University
Worked with Professor Guangliang Chen of SJSU on evaluating dimension reduction techniques in machine learning. Used lung genomics data to evaluate the runtime and effectiveness of state-of-the art dimensionality reduction techniques. Used Python for simulations.
Publication (B Guo, G Chen): Computational and Theoretical Analysis of Novel Dimensionality Reduction Algorithms in Data Mining
Publication Status: Accepted in JSM Proceedings 2019

Research Intern Zhang Lab at University of Pittsburgh School of Medicine
Developed a neural network platform used to use patient gene expression data to determine risk scores for pulmonary fibrosis diagnosis. Also performed computational analyses in R for the work in the paper.
Publication (X Li, SK, TC, JW, TT, JT, YD, B Guo, SF, JZ, JS, MR, SS, RL, CC, JA, DK, Y Zhang): Toll Interacting Protein Protects Lung Epithelial Cells from Bleomycin-Induced Apoptosis
Publication Status: Pending

ACTIVITIES

Goalkeeper for De Anza Force Premier Team and School Varsity Team *May 2016 - Present*
President of Math and Science Club *May 2019 - Present*
Director of Training for Model UN Club *August 2017 - Present*
Percussionist for San Jose Youth Philharmonic Orchestra *May 2018 - Present*
Director of Physics for Physics/Engineering Club *May 2019- Present*
President of Silicon Valley Forensics *August 2018 - Present*
Led my team in raising roughly $1000 in academic resources and scholarships for aspiring debaters.
Founder of Young American Policy Advocates *July 2019 - Present*
One of the founding members of YAPA, a ten-week program which educates students about local governments and legislation by matching them with elected officials who help them develop a bill or white paper.
Director of Tutors for CalTutors *August 2016 - Present*
Each week, I work with my team to host lectures on AMC and USACO competitions free for local students.
Boys State Delegate *June 2019*
Selected to represent my post district to attend, paid for by the government. Elected as the District Attorney and chosen as a finalist for the state-wide Oratorical Competition.