Ryan Zargham Cheng

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Software developer with substantial experience in app design and development. Seeking a research/internship position in bioinformatics/computer science/computer engineering.

EDUCATION

2024-Present	Cornell University – College of Engineering, Pursuing Biomedical Engineering with a minor in Computer Science – GPA 4.08
2021-2024	Harvard-Westlake School – Studio City, CA, US – GPA 4.52 SAT 1570, PSAT 1490, AP Test Scores: 5 (AP Computer Science A), 5 (AP Chemistry), 5 (AP BC Calculus), 4 (AP US History)
2023 Summer	American Culture through Film (SES 005) – Berkeley University – Grade 4.00
2020-2021	Oakwood High School – Oakwood, OH, US – GPA 4.00 (unweighted) AP Test Scores: 5 (AP World History), 5 (AP Music Theory)
2021 Summer	Python Programming – Stanford Pre-Collegiate Summer Institute
2020 Fall	Intro to "C" Programming (CSE153) – Miami University – Grade 4.00
2020 Summer	Statistics (STA261) – Miami University – Grade 4.00
2020	Data Science Professional Certificate – edX Berkeley

SOFTWARE DEVELOPMENT EXPERIENCE

2024-Present	Working on the software development branch of Cornell's Mars Rover Project Team. This involves programming the rover's automation with computer vision and path-finding algorithms.
2022	Individually developed a program that recognizes alphabet characters from live voice input. I used this to develop a children's spelling app that quizzes and checks spelling through voice input. App Presentation
2022	Developed Thinkable, an online forum for academic tutoring which placed Top 5 in the Harvard-Westlake School Hackathon.
2021	Individually developed a machine-learning model that classifies famous paintings by their style and artist. I used this to build an app that takes in an image of artwork created by the user, and then outputs the most similar painting done by a famous artist. Art App Presentation
2020	Individually developed Poly Roller, a typing game developed with Unity. Poly Roller Page
2020	Developed several games using Unity/C#, designed and animated several 3D models using Blender, developed deep-learning programs for image classification using TensorFlow, deployed trained models for image classification on iPhone/android using TensorFlow Lit, deployed apps on iPhone using Xcode.

SKILLS & TOOLS

Python, Java, C++/C#, MATLAB, Blender, Unity, TensorFlow, TensorFlow Lite, Xcode, ReactJS, React Native

AWARDS, ACTIVITIES, AND ACCOMPLISHMENTS

2024	National Merit Finalist
2023-2024	Harvard-Westlake Elected Senior Prefect: Worked as one of four representatives for my grade coordinating community events, reforming academics, and destigmatizing mental health issues.
2023-2024	Harvard-Westlake Alumni Association Co-Chair
2021-2022	Harvard-Westlake Business Incubator Participant
2021-2024	Harvard-Westlake Student Ambassador
2020-2021	Elected Student Body President, Oakwood High School
2022	Los Angeles 1st Place, United States 8th Place for LLS Student of the Year Fundraising (>$317,000)
2021	Scholastic Art & Writing Awards States Competitor Golden Key Winner
2021	Team member in Oakwood High School Academic Decathlon, National Championship
2020	Congressional App Challenge 1st Place
2020-2024	Track & Field Sprinter
2019-2021	Student Council Member, Oakwood High School

VOLUNTEER/WORK EXPERIENCE

2024-Present	Member of the Cornell Mars Rover Project Team: This team's goal is to build a semi-autonomous rover to compete in the annual university rover challenge.
2021-Present	President and Founder of the non-profit organization "Apps for World": I develop applications/games that donate advertisement revenue money to various causes, mainly environmental.
2022–2024	Leader of Harvard-Westlake Plot Twist: I volunteered for and eventually led a school club that provided weekly music lessons to children without access to music education.
2023	I worked as a paid cancer research intern under the supervision of Dr. Landgren at Miami's Sylvester Comprehensive Cancer Center through the University of Miami. I performed tumor tissue slicing, staining, and imaging in both multiple myeloma and lymphoma. I integrated various images into machine-learning models to predict treatment outcomes.
2022	Employee at Desert Light Lawn Service: 20 hours of yard work per week during the summer.
2019-2020	Worked as a lunchline cashier for Oakwood Junior High/High School cafeteria.
2018	Volunteered as an assistant for a summer camp, teaching younger kids how to code in a VR environment.

PUBLICATIONS

Patent pending, First inventor: Ryan Z. Cheng, Second inventor Kian N. Sharifi
Title: "*Multimodal Phone Call Application for Users with Language Barriers and/or Hearing Impairment*"
Application # 18/365,215

Ryan Z. Cheng, Enhancing Cancer Cell Detection in H&E Images through AI, Proceedings of the 10th International Conference on Health Informatics & Medical Systems (CSCE'24: July 22-25, 2024), to be published by Springer Nature.

Ryan Z Cheng, ArtMatch: Classifying Famous Paintings and Matching them with Children's Artwork, Proceedings of the 2020 International Conference on Computational Science and Computational Intelligence (CSCI'20: December 16-18, 2020, Las Vegas, Nevada, USA); Publisher: IEEE Computer Society + IEEE Xplore ISBN-13: 978-1-7281-7624-6; pp: 1487-1490

MUSIC EDUCATION

2021-2024	Studying with Ms. Joan Kwuon, Colburn Conservatory of Music, Los Angeles
2022	Montecito International Music Festival, Los Angeles
2022	CAIS Honors Music Festival
2021	VIA Music Academy Summer Program
2013-2021	Studied with Professor Kurt Sassmannshaus in the Starling Strings Program, Cincinnati College Conservatory of Music, Cincinnati

MUSIC AWARDS & RECOGNITIONS

2023	Charleston International Romantic Music Competition 2nd Prize Winner
2023	Music International Grand Prix Semi-Finalist
2022	Charleston International European Music Competition 1st Prize Winner
2022	Irvine Conservatory International Music Competition 2nd Prize Winner
2022	King's Peak International Music Competition 2nd Prize Winner,
2022	Charleston International 17th Century Music Competition 2nd Prize Winner
2022	Sherer Violin & Piano Competition Finalist
2021-2022	CAIS Honors Music Festival Nominations
2021	Cincinnati String Olympics Gold Medalist

MUSIC ACTIVITIES

2023-2024	Co-Concertmaster of the Harvard-Westlake School Chamber Orchestra
2021-2023	Concertmaster/Section Leader of the Harvard-Westlake School Symphony
2022, 2023	Carnegie Hall Performances (Section Leader)
2021-2022	Los Angeles Youth Orchestra
2021-2024	Member, Leader of Plot Twist: Volunteering to Teach Music
2020-2021	Founded and served as President of Oakwood High School's Tri M National Music Honors Society
2020-2021	Concertmaster of the Dayton Philharmonic Youth Orchestra
2020-2021	Concertmaster of Oakwood High School's Honors Orchestra
2018-2021	Concertmaster of Oakwood High School Orchestra
2013-2021	Starling Chamber Orchestra Violinist, Violist, Section Leader