

Azrin Khan

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EDUCATION

University of Southern California

BS in Electrical & Computer Engineering

Expected Graduation: May 2024

Francisco Bravo Medical Magnet High School

High School Diploma '20

PUBLICATIONS

A Novel Threshold-Based Segmentation Method for Quantification of COVID-19 Lung Abnormalities, (submitted for publication) *Researcher*

Jun. 2020 - Dec. 2020

- Developing a segmentation method to quantify COVID-19 lung abnormalities and to assist in analyzing disease progression using chest CT images.

A Literature Review of Image Findings in Post COVID-19, (in progress) *Researcher*

Jun. 2021 - Present

- Conducting review of 25 post COVID-19 patient imaging analysis papers.

RESEARCH AND WORK EXPERIENCE

USC Stevens Neuroimaging and Informatics Institute, *Researcher*

May 2019 - Present

- Joining the [COVID-19 Data Archive](#) project as a NSF REU student and collaborating with other researchers to collect multimodal datasets, develop an archive, and harmonize patient metadata since June 2020.
- Analyzing and performing segmentations of white matter on MRI brain scans to identify biomarkers of epileptogenesis after traumatic brain injury for the [EpiBioS4Rx](#) project. Segmented and recorded the size and locations of non-brain tissues from brain tissues and marked each area using ITK-SNAP, an imaging application.
- Presenting to underclassmen and incoming interns to expand their knowledge of the Laboratory of Neuro Imaging's involvements and to spread awareness about the significance of the development of antiepileptogenic interventions that may prevent or cure epilepsy.

California Science Center, *Education Presenter & Air and Space Host*

Jul. 2018 - Jan. 2020

- Leading and organizing hands-on demonstrations and activities to enhance visitors' knowledge of the role of science in human innovations and life processes of living things exhibited in galleries.
- Presenting to large school groups and visitors facts and histories of the displayed air and space artifacts, including the Space Shuttle Endeavour.
- Delivering interactive talks on specific topics displayed in the walk-in exhibit galleries and presenting about topics, such as satellites, light & sound, and the heart from educational carts.

Orthopaedic Institute for Children, *Office Help/Event Organizer*

May 2018 - Nov. 2018

- Assisting in organizing patient information and other paperwork to expedite patient wait times for service in help desks.
- Helping facilitate a lanyard jewelry making activity for young patients.

EXTRACURRICULAR ACTIVITIES

Coding Club, Founder/President Aug. 2018 - Jun. 2020
 Helping students gain a basic knowledge of the modern functions of programming to create sites and applications for competitions or personal development during weekly meetings.

Bravo Club Medical-Dental, Vice President/Club Representative Aug. 2017 - Jun. 2020
 Exposing members to the various medical careers by leading in-depth weekly presentations about specific careers in the medical field, preparing educational pathway timelines, and contacting and inviting guest speakers from various medical careers.

Popsicle Bridge Building Team, Captain Sept. 2017 - Jun. 2019
 Leading team members through the process of designing and constructing the bridge and writing the technical report. Competed in the 25th Annual Popsicle Stick Bridge Competition.

Mathematics, Engineering, and Science Achievement (MESA), Aug. 2015 - Jun. 2020
5-Year Member
 Competing in several team and individual competitions at the regionals. Leading my team in various competitions from building popsicle stick bridges to creating and presenting Arduino-based solutions for humans.

HONORS

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| NSF REU at USC Laboratory of Neuro Imaging | Jun. 2021 - Present |
| NSF REU at USC Laboratory of Neuro Imaging | Jun. 2020 - Aug. 2020 |
| LA County Science & Engineering Fair: 1st Place UCLA Brain | Mar. 2019 |
| Research Institute Special Award | |
| Bravo-USC Science and Engineering Fair: Computer Science: 1st Place | Feb. 2019 |
| Honor Roll Student/High Honors | Jan. 2017 - May. 2020 |

SKILLS

Technical Skills

- Designing and programming Arduino-based models with sensors
- C/C++, Python
- ITK-Snap, ImageJ

Related Coursework

- Embedded Systems
- Programming in C++

Hobbies

- Acoustic guitar
- Landscape photography
- Biking around the neighborhood