

Joseph Bae

M.D./Ph.D. Student

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<https://joseph-bae.github.io/>

Work Experience

- December 2019 to Present **Department of Biomedical Informatics, Stony Brook University**
Ph.D. Student Researcher
Perform machine learning and computer vision research under Dr. Prateek Prasanna. Ongoing studies include radiomic and deep learning analysis to predict disease outcomes in COVID-19 and cancer.
- August 2020 to February 2021 **PathCheck Foundation, Massachusetts Institute of Technology**
Science Officer
Lead a multinational team of scientists, doctors, and engineers to develop digital systems for equitable COVID-19 vaccine distribution in the US and other countries (patent pending). Served on the leadership committee for the Vaccines for All Conference hosted at MIT.
- May 2015 to December 2018 **Convergent Sciences Institute in Cancer, University of Southern California**
Undergraduate and Master's Student Researcher
Conducted research on circulating tumor cells in colorectal and prostate cancer using wet lab and computational techniques as a member of the Kuhn Lab. Member of the inaugural class of the Bridge Undergraduate Scientist Program. Assisted in organizing undergraduate researchers and volunteers.
- December 2014 to May 2018 **Global Medical Missions Alliance**
Vice President
Organized conferences, volunteering events, and medical missions to underserved communities. Served on medical missions to Siloé Clinic in La Misi3n, Mexico and coordinated campus visits by healthcare professionals from a variety of fields.

Skills

Data Science: Python, MATLAB, Java, machine-learning, descriptive and inferential statistics
Leadership: Experience leading interdisciplinary teams, managing multiple simultaneous projects, and presenting to scientific and public audiences
Writing: Scientific publications, conference proceedings, blog posts
Applications: Microsoft Office (Excel, Word, PowerPoint, Publisher, etc.), Sony Vegas
Wet Lab: Basic wet-lab techniques including PCR, cell culture, immunofluorescence, etc.

Awards

Facebook COVID-19 Symptom Data Challenge Finalist
Stanford Biodesign Hackathon 2020 - Best COVID-19 Project Award
USC Trustee, University, Asian Pacific American Scholarships
Rose Hills Foundation, USC Provost, Dornsife Scholar, Discovery Scholar Research Fellowships
Phi Beta Kappa Member
National Merit Scholar

Education

2nd year Medical Scientist Training Program (M.D./Ph.D.) student at Stony Brook University
USC M.S. Medical Biophysics & B.S. Biophysics 2018
Warren Bennis Scholar, Resident Honors Program, Thematic Option, Physics Honors Program
Undergraduate/Graduate GPA – 3.82/3.83
MCAT – 523