Marissa D'Souza

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EDUCATION

Mercer University School of Medicine   **August 2017 - May 2021**
Doctor of Medicine

Georgia Institute of Technology, College of Computing   **August 2013 - May 2017**
Bachelor of Science in Computer Science, Certificate in Entrepreneurship   *Overall GPA: 3.5/4.0 | Major GPA: 3.9/4.0*

EXPERIENCE

Department of Surgery, Memorial University Medical Center   **Dec 2017 - Present**
Clinical Research Assistant
- Collaborating with Dr. Christopher Senkowski on an Engagement Award Initiative Notice grant from the Patient Centered Outcomes Research Institute
- Planning a conference to be held in January 2019 to address a few of the disparities present in surgical care and outcomes, particularly in cancer and trauma

Department of Neurological Surgery, Stanford University Medical Center   **November 2017 - Present**
Remote Research Assistant
- Collaborating with Dr. Aditya Iyer and Dr. Gary Steinberg on a literature review analyzing the effect of embolization prior to radiosurgery for the treatment of brain arteriovenous malformations

Georgia Tech Cognitive Neuro Motor Control Lab   **Jan 2015 - May 2017**
Research Assistant
- Examined differences in force modulation between healthy adults and adults with spinal cord injury in order to come up with unique neuro-rehabilitation strategies in collaboration with Dr. Lewis Wheaton (GT) and Dr. Deborah Backus (Shepherd Center)
- Ran and analyzed MRI and EEG data through the use of Excel, SPSS, MATLAB, and R

Shepherd Center Rehabilitation Hospital   **Jan 2016 - May 2017**
ProMotion Fitness Buddy
- Provided fitness support for community members in the ProMotion gym facility as well as assisting members with their fitness plans.

Center for Advanced Brain Imaging   **May 2014 – Jan 2015**
Research Assistant
- Investigated the effects of brain games and training on one's cognitive skills under Dr. Eric Schumacher
- Used MATLAB and E-Prime software to conduct experiments, record results, and analyze data

Department of Pathology and Laboratory Medicine, Emory University School of Medicine   **Jun 2011 - Aug 2011**
Summer Research Assistant
- Researched the part folic acid receptors have to play in nanoparticle vaccination delivery under Dr. Periasamy Selvaraj

Department of Immunology, Mercer University   **May 2011 – May 2016**
Research Assistant
- Determined the effects of nanoparticle formulation as a potential tumor targeting and imaging delivery system

Johns Creek Tennis Academy   **May 2011 - August 2014**
Tennis Coach
- Taught kids aged 5-15 strokes how to play tennis along with the rules of the game and good behaviors on the court

PUBLICATIONS

- Iyer, A., D'Souza, M., Steinberg, G. (2017). *Embolization before Stereotactic Radiosurgery (SRS) for the Treatment of Brain Arteriovenous Malformations.* Manuscript in revision.
- D'Souza, M., Gala, R., Ubale, R. (2015). Trends in Nonparental Delivery of Biologics, Vaccines, and Cancer Therapies. In *Novel approaches and strategies for biologics, vaccines and cancer therapies.* Academic Press.
- D'Souza M.J., Tawde S.A., Akalkotkar A., Chablani L., D'Souza M., Chiriva-Internati M. (2014). Nanotechnology in Vaccine Delivery. In *Molecular Vaccines.* Springer, Cham.
- Kolluru, L., Rizvi, S., D'Souza, M. (2013). Formulation development of albumin based theragnostic nanoparticles as a potential delivery system for tumor targeting. *Journal of Drug Targeting,* 77-86.

LEADERSHIP

Phi Delta Epsilon International Medical Fraternity | Epsilon Mu Chapter   **December 2017 - Present**
Vice President of Recruitment
- Producing marketing material and planning events to encourage growth and membership within the chapter
- Collaborating with other executive officers for various logistics associated with founding a chapter

Student Council | Mercer University School of Medicine   **November 2017 - Present**
Class Secretary
- Sending weekly correspondence with upcoming deadlines, dates, and important reminders to help keep the class organized and in-the-loop
- Organizing the student council Google Drive and taking minutes at meeting in order to maintain records within the organization

Multicultural Greek Council (MGC) | Georgia Tech   **Jan 2015 – Dec 2015**
Executive Vice President
- Corresponded with the President of MGC as well as the Presidents of other Greek councils to organize campus-wide events to help students get together and give back to the campus

Sigma Sigma Rho Sorority, Inc. | Georgia Tech   **Jan 2014 – Dec 2015**
Vice President of Communications, Philanthropy Chair, Public Relations Chair, Marketing Chair,, Recruitment Chair
- Managed logistics and crucial marketing/delegating critical tasks to ensure success of all events
- Increased intake by 150% through the use of effective marketing strategies including photography, flyers, and the redesign of the website: gtsigsigrho.com

Biomedical Engineering Society | Georgia Tech   **Jan 2014 - May 2015**
Secretary
- Encouraged the use of technology within the club through extensive collaboration with the web developer and other board members

PROJECTS

VADERS (Value Analysis Data Extraction Research System)
- Implemented a software with Dr. Bruce Ziran that utilized image recognition to analyze fracture reductions
- Incorporated machine learning and classification algorithms (k-Nearest Neighbors) to combine reduction quality with time and cost of surgery to determine the quality and value of a surgeon

"Food Renewed" App
- Collaborated with Feed the Children to create an iOS application and web based mobile site that matches individuals in the Supplemental Nutrition Assistance Program with grocery stores and restaurants that are about to throw out food
- Utilized Material Design for user interface development and Django for back end development

"Shopping With Friends" App
- Created an Android and iOS application for shoppers to post information about various items' prices, locations, and availability to share with friends

"When I Grow Up" App
- Designed and protoyped an iOS app using Axure which features a board game designed to help users determine which career fields and roles match their interests the most and manage a career on the game board from entry level to retirement

SKILLS/INTERESTS

Languages: CSS, HTML, MATLAB, SPSS, Java, JavaScript, jQuery, Python, R, Django, Material Design, Swift

Software: SolidWorks, Adobe Creative Suite, AFNI Neuroimaging, OSX, Microsoft Office Suite, LaTeX, Android Studio, Xcode, Axure

Coursework: Applied Combinatorics, Computational Photography, UI Design, Computer Graphics, Data Structures and Algorithms, Computer Organization and Architecture, Information Visualization, Industrial Design Computing II, Real Estate Development, Marketing Management, Object Oriented Programming

Volunteer: Fulton County Animal Shelter, Georgia SPCA, Habitat for Humanity, Hands On Atlanta