

# Isaiah Casarez

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## EXPERIENCE

08/2021 – 12/2021

### SAN JOSE STATE UNIVERSITY

San Jose, CA

#### *Graduate Teaching Assistant*

- Facilitate support courses for College Algebra and Mathematics in Politics.
- Oversee and design weekly assignments for students in College Algebra support courses.
- Grade assignments for Mathematics in Politics.
- Teach a College Algebra course section as well as grade assignments and create exams.

06/2020 – 07/2020

### YES PREP PUBLIC SCHOOLS

Houston, TX

#### *IT Field Technician Intern*

- Maintained, repaired, and upgraded operating systems including hardware and software.
- Management of data retrieval and backup processes
- Assisting school district with troubleshooting and resolving technical problems and programs.
- Installed academic software on devices
- Management of administrator access
- Use of Microsoft Azure in management of district programs and software

08/2019 – 05/2020

### THE UNIVERSITY OF ARIZONA

Tucson, AZ

#### *Senior Capstone Research Project*

- Reviewed, summarized, and analyzed academic literature on glioblastoma growth and radiation treatment
- Developed a mathematical model on the nature of metastases formation the mortality rate of tumorous growths
- Examined the effectiveness of current models on the growth of malignant tumors and extended upon them to create more robust and accurate models of cancer dynamics
- Implementation and manipulation of Matlab code for model dynamics and analysis

08/2019 – 05/2020

### THE UNIVERSITY OF ARIZONA

Tucson, AZ

#### *Undergraduate Research Assistant*

- Evaluated the effectiveness of certain statistical methods and created metrics to determine the adequacy of simulation from different models.
- Investigated the use of neural networks in image processing to categorize data to produce a convolutional neural network aimed in applications to medical data, health-science data.
- Examined the use of a variety of neural networks and their application to topics such as time series analysis and sequence generation.
- Imported and manipulated R programs for use in neural network analysis
- Analyzed stochastic processes such as Markov Chains and Random Walks with implementation in R

08/2019 – 05/2020

### THE UNIVERSITY OF ARIZONA

Tucson, AZ

#### *Undergraduate Teaching Assistant*

- Facilitated a positive environment for successful student learning by actively engaging students in the course work and encouraging productive struggle
- Communicated effectively amongst a team to ensure information is thoroughly understood to lead students in the course work
- Individualized learning experiences for students by evaluating performance within the course and encouraging overall growth in students
- Assisted in leading lessons throughout the semester
- Hosted office hours for students, both online and in person.

**EDUCATION**  
2021

**SAN JOSE STATE UNIVERSITY**

**MS Statistics**

Notable coursework:

- Math 163 - Probability Theory
- Math 261A - Regression Theory and Methods
- Math 167R - Statistical Programming with R

2017 – 2020

**THE UNIVERSITY OF ARIZONA**

**BS Mathematics**

Notable coursework:

- Math 313 - Introductory Linear Algebra
- Math 485 - Mathematical Modeling
- Math 454 - Ordinary Differential Equations and Stability Theory
- Math 466 - Theory of Statistics

**SKILLS**

- Accuracy and attention to detail
- Demonstrate ability to work with minimal supervision
- Excellent written and verbal communication skills as well as excellent organization in code languages
- Proficient with computer applications (MS Office, Excel, etc)
- Proficient in the use of data analysis platforms such as R, Python, C++, SQL
- Excellent organizational skills, time management, and ability to communicate workload and meet established deadlines