

# Javier Salazar

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## EDUCATION

### UNIVERSITY OF TEXAS AT ARLINGTON | BS IN ELECTRICAL ENGINEERING & MATHEMATICS

August 2015 - May 2020 | College of Engineering & Science | Arlington, Texas

Cum. GPA: [4.0 / 4.0](#) • Senior Design Project: [Wheelchair Dynamometer](#)

Interests: Digital Signal/Image/Video Processing • Neural Networks • Telecommunications • Control Systems • Applied Math

Notable Works: | [Machine Learning Projects](#) | [Designing a WiFi Fractal Antenna Using ANSYS HFSS](#) |

[Video Compression \(MPEG Intraframe & Differential PCM\)](#) | [Numerical Analysis Algorithms](#) | [IOT Weather Station](#) |

## RESEARCH

### MRI MESH & SLING SEGMENTATION | UT SOUTHWESTERN & UT ARLINGTON | RESEARCHER

September 2018 – August 2019 | Dallas & Arlington, Texas

- Researched methods of identification & segmentation of meshes & slings, along with common pelvic floor features, in MR images for radiologist assistance in 3D visualization-guided surgery planning
- Researched machine learning & deep learning techniques. along with data augmentation methods, to perform segmentation tasks ([Github Page](#))
- Presented poster 'Automatic Segmentation & 3D Visualization of MR Images of Pelvic Floor' at the Modern Challenges in Imaging conference located at Tufts University, Medford, Massachusetts

### MATHEMATICS OF MISINFORMATION REU | DARTMOUTH COLLEGE | RESEARCHER

June 2018 – August 2018 | Hanover, New Hampshire

- Researched the mathematics of Bayesian inference methods for applications in iceberg prediction tracking
- Wrote Python programs to perform the following tasks: created iceberg path model using ordinary differential equations, simulated model using Markov chain Monte Carlo sampling techniques, and predicted drag coefficients ([Github Page](#))

### MATHEMATICS OF MEDICAL IMAGING REU | UNIVERSITY OF TEXAS AT ARLINGTON | RESEARCHER

September 2016 – August 2017 | Arlington, Texas

- Researched the mathematics of computerized tomography relating to the following: Radon transform, back projection, Fourier transform, filters, convolution, and discrete image reconstruction
- Wrote MATLAB programs to perform the following tasks: created artificial phantoms, imitated CT scanning, and reconstructed images based on sinogram data ([Github Page](#))

## EXPERIENCE

### BROHARD ARCHITECTURE | ARCHITECTURAL DRAFTSMAN

September 2017 – July 2019 | Dallas, Texas

- Designed 3D building/object models using Autodesk Revit (pre-construction plan process)
- Created floor plans, ceiling plans, interior/exterior elevation plans, and perspective plans for commercial & residential projects ([Example Image](#))

### PREMIER SURVEYING | AUTOCAD TECHNICIAN

January 2015 – August 2017 | Plano, Texas

- Drafted residential title surveys using Autodesk AutoCAD Civil3D ([Example Image](#))
- Analyzed field data, city plats, FEMA flood maps, title commitments, and easements to construct drawings

## SKILLS

### CERTIFICATIONS

[F.E. Electrical & Computer](#)  
[SolidWorks Associate](#)  
[CompTIA A+](#)  
[AutoCAD Professional](#)  
[AFPA Personal Trainer](#)

### LINKEDIN ASSESSMENTS

Microsoft Power BI (Passed)  
 mySQL (Passed)  
 Python (Passed)  
 R (Passed)

### LANGUAGES

Traditional Languages:  
 English • Spanish (Native)  
 Programming Languages:  
 Matlab • Python •  $\text{\LaTeX}$   
 Linux CLI & Bash