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 • Data Science • Applied Math
Notable Works: | Machine Learning Projects | Stochastic Models & Simulations | Numerical Analysis Algorithms | Video Compression (MPEG Intraframe & Differential PCM) | Designing & Optimizing WiFi Antenna w/ ANSYS HFSS |

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 coefficents (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 Badge (Active)
mySQL Badge (Active)
Python Badge (Active)
R Badge (Active)

LANGUAGES

Traditional Languages:
English • Spanish (Native)
Programming Languages:
Matlab • Python • LaTeX
Linux CLI & Bash