Jose A. Salcido

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Education

M.S. PHYSICS | 2018-2018 | N EW MEXICO TECH
COMPLETED COURSEWORK: PLASMA & HIGH-ENERGY ASTROPHYSICS

B.S. ASTROPHYSICS | 2007 - 2010 | UCLA

A.A. LIBERAL ARTS | 2004 - 2007 | COLLEGE OF THE DESERT

A.S. COMPUTER NETWORKING & IT | 2001 – 2002 | HIGH-TECH INSTITUTE

Skills & Abilities

PROGRAMMING LANGUAGES

Python, C++, VBA

SIMULATION & HPC RELATED SOFTWARE

AFSIM, SPySE, COAST/FIST, DSRC, GSB, PBS

OTHER SOFTWARE PACKAGES

Tensorflow, PyTorch, Sci-Kit Learn, Keras, PyArrow, Scipy, Numpy, Pandas, Jupyter, Matplotlib, Astropy, Beautiful Soup, Plotly, Argparse, Git, JIRA, Bash, MPI, Matlab, LaTeX, Emacs, AIPS, CASA, IDL, IRAF

SOFT SKILLS

Proven ability to lead an agile team both remotely and in-person, demonstrating exceptional collaboration and communication skills. Proficient in leveraging communication and collaboration tools to ensure completion of projects with tight deadlines, and acquisition of additional follow-on contract and project funding.

PUBLICATIONS

The Karl G. Jansky Very Large Array Sky Survey (VLASS). Science case, survey design and initial results. Publications of the Astronomical Society of the Pacific, Volume 132, Issue 1009

Work Experience

SPACE SYSTEMS ANALYST | STELLAR SCIENCE | 2018 - PRESENT

- Demonstrated ability to work autonomously without any supervision, consistently delivering high-quality results.
- Contribute to business development efforts including building relationships with current and prospective clients, representing the company at industry events, and contributing to Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) proposals which secured additional contract work.
- Perform technical phone and in-person interviews with prospective analysts and Artificial Intelligence Machine Learning (AI/ML) expert candidates.
- Perform modeling and simulation techniques for various types of studies within AFSIM in support of the Air Force Research Lab Space Directorate (AFRL/RV) and the U.S. Space Force.

- Train Neural Networks and Physics Informed Neural Networks (PINN) to construct prediction models by employing the latest machine learning library packages, including Keras, Sci-Kit Learn, PyTorch, and Tensorflow. Automate analysis to ensure validity and performance of trained models.
- Modeling Simulation and Analysis (MS&A) work utilizing DoD Super Computing Resource Center's (DSRCs), Galaxy Simulation Builder (GSB), and PBS scripting.
- Development of customized data reduction pipeline for ingestion of large Terabyte data sets and construction of data products, including interactive plots for quick analysis by end-users.

SCIENTIFIC DATA ANALYST II | NATIONAL RADIO ASTRONOMY OBSERVATORY | 2015 - 2018

- Group lead for the Very Large Array Sky Survey (VLASS) imaging group. Lead image analysis group in processing astronomical radio images using image synthesis techniques and algorithms.
- Provided helpdesk assistance to end-users of the Common Astronomical Software Application (CASA) software package.
- Helped users understand pipelined data-reduced results and provided guidance on methods to improve image quality by performing additional data reduction and calibration techniques.
- Helped operate and maintain a scientific data calibration pipeline and performed quality assurance of calibrated data products.
- Created online tutorials on RFI flagging techniques for radio astronomical data in preparation for use during the 15th Synthesis Imaging Workshop (June 2016).
- Performed weekly end-to-end stress tests on the 27-dish array of radio antennas composing the Karl. G. Jansky Very Large Array near Socorro, New Mexico.

OPERATIONS SPECIALIST II | NATIONAL RADIO ASTRONOMY OBSERVATORY | 2012 - 2015

- Under minimal supervision, conducted scientific astronomical radio observations (1-50GHz) utilizing the 27-dish array of radio telescopes composing the Karl. G. Jansky Very Large Array near Socorro, New Mexico.
- Ensured safety of scientific equipment (radio antennas, data correlator) as well as safety of personnel visiting and conducting maintenance.
- Performed hardware and software troubleshooting during scientific observations in order to correct issues that may affect data. Generated maintenance reports when issues were beyond my control.

UNDERGRADUATE RESEARCH | UCLA DEPARTMENT OF PHYSICS AND ASTRONOMY | SUMMER 2008

- Conducted research of astronomical infrared data taken by the Spitzer Space Telescope in the 10 to 15 μm region. Research involved attempting to determine size, composition, and temperature of a proto-planetary disk around a young Herbig Ae star.
- Utilized superposition, error analysis, and Monte-Carlo simulations to determine various characteristics of silicate emissions.

INTERN| U.S. DEPARTMENT OF COMMERCE, CENSUS BUREAU| SUMMER 2007

- Developed a user-friendly database and associated User Interface (UI) utilizing Microsoft Visual Basic for Applications and Microsoft Access.
- Database consolidated data from multiple existing databases and accepted new user inputs. UI helped users easily generate Word and PDF documents with queried data and track evaluations of department field representatives.