

Sylvana Yelda

Bend, OR

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Data scientist and software developer with strong research background and expertise in big data, machine learning, and agile software development. Possesses strong problem-solving and critical-thinking skills, with a passion for developing practical and innovative software solutions.

Education

Ph.D., Astrophysics, 2012 - University of California, Los Angeles

M.S., Astrophysics, 2008 - University of California, Los Angeles

B.A., Psychology, 2002 - University of Michigan

Technical Experience

Computing

- **Languages/Programming:** R, Python, NumPy, SciPy, Pandas, Shiny, SQL, TkInter, IDL, shell scripting, HTML, JavaScript, D3, HTTP, REST, Fortran
- **Big Data Technology:** HDFS, Hadoop, Hive, Impala, MapReduce, Amazon Web Services
- **Software Development:** Agile, Continuous Integration, Git, GitHub, Subversion, Jira
- **Systems/Applications:** Mac OS X, Unix, Linux, Windows, MS Office, Google Analytics

Data/Analytics

- Create, modify, and query relational databases in Hive & Impala SQL
- Machine learning, statistical methods including predictive modeling, regression, cluster analysis, pattern recognition, surface fitting, Monte Carlo simulations, A/B testing
- Image reduction, registration, simulation and processing, data visualization

Soft Skills

- Detail-oriented and skilled at identifying problems and determining robust solutions
- Extensive experience developing and delivering presentations explaining complex analyses and phenomena to variety of audiences
- Well-versed in writing scientific papers as well as detailed performance reports
- Experience working in international and interdisciplinary teams

Professional Experience

Data Scientist, Gravity (AOL/Verizon), Santa Monica, CA (March, 2015 – Present)

Develop data pipelines and machine learning algorithms in support of Gravity's content recommendation system.

Responsibilities & Accomplishments:

- Develop package that uses reinforcement learning to maximize click-through-rate
- Develop web applications for visualizing and verifying data
- Create data and automated test scripts to identify bugs and validate code
- Design experiments and interpret results using quantitative approaches
- Prepare written and graphical analyses as needed by product and engineering teams

Member of Technical Staff, Aerospace Corporation, El Segundo, CA (June, 2014 – March, 2015)

Developed model and simulation software to test the performance of ground-based and space-based electro-optical sensors.

Responsibilities & Accomplishments:

- Modeled and simulated infrared and visible imaging data for proposed sensors
- Provided performance analysis for proposed electro-optical sensors to customers in order to guide design choices
- Published internal technical reports as well as documentation for customers

Postdoctoral Researcher, University of California, Los Angeles – Department of Astronomy & Astrophysics (September, 2012 – June, 2014)

Investigated the performance of the future Thirty Meter Telescope's InfraRed Imager and Spectrometer (IRIS) by planning and carrying out trade studies on the Galactic center.

Responsibilities & Accomplishments:

- Developed code to simulate, calibrate, and analyze adaptive optics imaging data
- Conducted statistical analyses and modeling of both real and simulated data sets to test performance of the camera; report findings to camera design team
- Delivered written reports describing design, analysis, and results of trade studies
- Designed and carried out observing programs using the W. M. Keck and Gemini South Observatories to collect adaptive optics infrared imaging and spectroscopic data
- Maintained data reduction pipeline and relational database of astrophysical data
- Published research in peer-reviewed journals and presented research findings at international conferences

Graduate Student Researcher, University of California, Los Angeles – Department of Astronomy & Astrophysics (September, 2006 – August, 2012)

Researched star formation in the vicinity of the supermassive black hole at the center of our Galaxy. Developed methods for precise positional measurements of fast-moving stars in an extremely dense environment.

Responsibilities & Accomplishments:

- Developed computer programs to mine and analyze astrophysical data; analyses included image reduction, calibration and statistical modeling of data
- Designed and carried out project to statistically model optical distortion in the Near Infrared Camera 2 (NIRC2) at the Keck Observatory; produced and disseminated tools for distortion correction to the astronomical community
- Published research in peer-reviewed journals and presented findings at conferences
- Advised five students on undergraduate research projects