

Janine Aquino

Lafayette, CO | 303-497-8691(w) | [janine at ucar dot edu](mailto:janine@ucar.edu)

Profile

Independent, self-starter possessing a combination of software engineering skill and physics & atmospheric science education that make me uniquely qualified to approach software developments for scientific instrumentation, optimizing for software resiliency and efficiency while also maximizing scientific utility and understanding.

Skills & Abilities

- Expert skill in full-stack, cross-platform development and testing of complex software systems employing standard libraries.
- Expertise in and strong theoretical knowledge of modern software engineering tools and methodologies applying advanced technical principles, theories and concepts to software developments.
- Expert skill analyzing and modifying code written by others.
- Diverse background spanning domains including: software engineering; networking; system administration; meteorological data analysis, processing and visualization; and web content management
- Strong advocate for modern reproducible research
- Ability to assess and negotiate priorities to efficiently accomplish mission-critical goals in a resource limited environment.
- Advanced skills in managing complex, long-term software development projects.
- Skill in identifying and prioritizing the critical components of a project that have the greatest impact on long-term organizational success.
- Expert at managing multiple tasks, streamlining processes, and interacting with multiple management entities.
- Advanced problem solving skills that combine fact finding, innovation, resourcefulness and the ability to learn new material quickly.
- Excellent oral, written and presentation communication skills. Strong ability to convey complex technical concepts to various levels of technical and non-technical staff.
- Excellent team-building skills. Dedicated to developing the next generation of software engineers and data scientists.

Janine Aquino

Lafayette, CO | 303-497-8691(w) | [janine at ucar dot edu](mailto:janine@ucar.edu)

Experience

2022-present **Software Engineer IV**, NCAR/EOL

2008-2021 **Software Engineer III**, NCAR/EOL

- Design, direct, and implement the creation of complex software systems in support of RAF instrumentation, including real-time instrument control, GUI design and development, data acquisition and transfer, quality control, processing and visualization.
- Configure and support hardware and networks aboard RAF aircraft in support of NCAR field projects. Contribute to the feasibility assessment, design and preparation for, and actively participate in, the field phase of RAF field projects
- Provide guidance, mentoring and training on data, software and scripting, and software tools to junior software engineers, data managers, and scientific and technical staff
- 25 years as an NCAR "Wizard" performing outreach and informal science education

1997-2008 **Software Engineer II**, NCAR/EOL (formerly of UCAR/JOSS)

- Collect and provide long-term archival, stewardship and curation of research and operational datasets and associated documentation and metadata.
- Customize data management tools and webpages, including discovery and access.
- Develop composite datasets with consistent formatting and standards across diverse data sources.
- Rescue legacy datasets

1994-1996 **Associate Scientist I**, NCAR/MMM

- Process, quality assure, and create visualizations of atmospheric datasets in support of cloud physics research.

1994 **Professional Research Assistant**, Program for Atmospheric and Oceanic Sciences, University of Colorado, Boulder (6 mos)

- Analyze software coupling atmospheric and oceanic models and identify sources of dynamic instability.

Education and Certifications

Certified Project Management Professional 12/2015 - 12/2018

ESWN Building Leadership and Management Skills for Success Workshop

UCAR Supervisory Certificate

Post-Graduate work in Computer Science, University of Colorado at Boulder

M.A. Astrophysical, Planetary, & Atmospheric Sciences, University of Colorado Boulder

B.A. in Physics with emphasis in astrophysics, University of Colorado at Boulder

Janine Aquino

Lafayette, CO | 303-497-8691(w) | [janine at ucar dot edu](mailto:janine@ucar.edu)

Publications

Aquino, J. et al. (2017) *Motivation and strategies for implementing Digital Object Identifiers (DOIs) at NCAR's Earth Observing Laboratory -- Past progress and future collaborations* Data Science Journal <http://dx.doi.org/10.5334/dsj-2017-007>

Weckwerth, T., H. Murphey, C. Flamant, **J. Goldstein**, C. Pettet (2008) *Observational study of convective initiation on 12 June 2002 during IHOP_2002* Monthly Weather Review <http://dx.doi.org/10.1175/2007MWR2128.1>

Heysmsfield, A., G. McFarquhar, W. Collins, **J. Goldstein**, F. Valero, J. Spinshire, W. Hart, P. Pilewskie (1998) *Cloud properties leading to highly reflective tropical cirrus: interpretations from CEPEX, TOGA, COARE, and Kwajalein, Marshall Islands* Journal of Geophysical Research-Atmospheres <http://dx.doi.org/10.1029/97JD03679>

In addition, I have authored posters, presentations, and technical reports for scientific, software and data focused conferences and journals, and have reviewed manuscripts for scientific journals. See <https://staff.ucar.edu/users/janine>

Honors

- EOL Special Recognition Award
- UCAR Center for Science Education Special Recognition Award
- UCAR Outstanding Accomplishment Award, Scientific and Technical Advancement
- Three EOL Incentive Awards
- UCAR Outstanding Accomplishment Award, Education and Outreach: two nominations, one win
- Newkirk Fellowship for the pursuit of graduate studies
- Elected Sigma Pi Sigma Physics Honor Society
- Regents Scholarship