Julie Prestopnik

julie@prestopnik.com

303-485-5495

WORK EXPERIENCE

Software Engineer III, University Corporation for Atmospheric Research

Boulder, CO — June 2017 - present

I am a primary engineer on the Graphical Turbulence Guidance (GTG) system. I am responsible for the day-to-day support, technical development of the libraries, applications, and scripts in C/C++ and Python and testing and monitoring the system. I am also responsible for the technical transfer, documentation of the system, and communication with internal and external parties.

I provide software engineering support to the Developmental Testbed Center on the Model Evaluation Tools (MET) project and am a primary engineer on the Model Evaluation Tools + (MET+) project, working closely with scientists and engineers both at NCAR and at NOAA. MET+ is a set of python modules that have been developed with the flexibility to run MET for various use cases or scenarios. The goal is to "simplify" the running of MET for scientists.

I am the primary responsible party for the RAL Nightly Builds which run on multiple machines on various platforms.

Software Engineer II, University Corporation for Atmospheric Research

Boulder, CO — June 2009 - June 2017

I was a primary engineer on the Graphical Turbulence Guidance (GTG) system. I was responsible for the day-to-day support, technical development of the libraries, applications, and scripts in C/C++ and Python and testing and monitoring the system. I was also responsible for the technical transfer, documentation of the system, and communication with internal and external parties.

I helped design and create requirements, defined the initial default configuration file, created new Python code, and was responsible for the technical transfer and support for the Model Evaluation Tools + (MET+) project. This new MET+ package is a set of Python wrapper scripts around the MET verification tools. MET+ development began in 2016 with initial development for the cyclone-relative verification for the Stony Brook University (SBU) project and is headed toward a larger focus on replicating the Global Deterministic National Centers for Environmental Prediction (NCEP) Verification. Future work will focus on ensemble, meso and storm scale verification of NCEP and public support.

I contributed to the Pikalert project and the In Situ project by providing engineering support by writing library and application C++ code, creating documentation, and doing technical transfers, and to the NASA A-Train project by helping retrieve, convert, and re-grid a variety of aviation products and satellite data sets.

I am the primary responsible party for the RAL Nightly Builds which run on multiple machines on various platforms. I have attended a workshop on the LDM and have given presentations at UCAR's RAL retreats.

Software Engineer I, University Corporation for Atmospheric Research

Boulder, CO — June 2005 - June 2009

I designed, implemented, and tested C++ applications to enhance quality control checks on United Airlines in situ data and analyzed flight data using Matlab for the In Situ Turbulence Project.

I evaluated the METRo (Model of the Environment and Temperature of Roads) model to see if it could provide the best prediction for the MDSS (Maintenance Decision Support System). I modified and wrote new C/C++ and Python code to

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integrate METRo with the existing MDSS code. I wrote an ingestor to read NetCDF and write XML and the reverse, and converted XML output to CSV output.

I modified and wrote new Python scripts to add functionality to the GTG system, simplify and better automate the playback system, and fix bugs. I worked with scientists to creately necessary ASCII and NetCDF files for analysis and to create turbulence summary data.

Student Assistant III, University Corporation for Atmospheric Research

Boulder, CO — April 2004 - June 2005

I modified C++ libraries and applications to enhance the quality control on observations, helped determine reasonable variable range limits and performed tests to see how often data went outside these ranges.

I wrote Python scripts to convert ASCII METAR time series data into HDF5 and the reverse, wrote Perl scripts for copying various types of data from the mass store to external disks, and wrote Perl scripts to convert ASCII data into a newer ASCII format and applied quality control range checking.

Student Assistant, BioServe Space Technologies

Boulder, CO— October 2002 - May 2003

I assisted in implementing a GUI in Qt and C++ that allowed ground control to interact with payloads on the Space Shuttle and International Space Station, wrote Perl programs to generate web content, and helped assemble hardware and install Debian and Debian packages.

Loan Assistant, FirstBank of Longmont

Longmont, CO— August 2001 - August 2002

I ensured insurance compliance on existing loans, processed note and deed of trust cancellations on paid loans, prepared loan payoff notices, and prepared written correspondence for officers.

Assistant Vice President, FirstBank of Longmont

Longmont, CO— September 1998 - August 2001

I underwrote and approved consumer and commercial loans, and collected on past due loans. I supervised and managed the teller, bookkeeping, and customer service departments.

Audit Intern, Coopers & Lybrand, L.L.P

Orlando, FL— January 1998 - March 1998

I provided auditing services to clients through accounting data analysis, detailed information test work, and documentation of accounting software.

EDUCATION

University of Colorado

August 2001 - June 2005

Bachelor of Science - Computer Science (with Honors)

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Overall GPA: 3.8

University of Central Florida

August 1994 - June 1998

Bachelor of Science - Accounting (Cum Laude)
Overall GPA: 3.6

REFERENCES

Available upon request.