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# PETER EFFERTZ

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*Bachelor's of Science Degree in Meteorology with five years of experience with air quality and meteorological instrumentation at the Virginia Office of Air Quality Monitoring. Proficient in computer programming and working with Meteorological datasets. Local leader of the American Meteorological Society Chapter.*

## **EXPERIENCE**

ENVIRONMENTAL SPECIALIST; VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, RICHMOND, VA – 2015-PRESENT

Calibrations, repair, maintenance, installations, and quality control of air quality and Meteorological instrumentation, including Thermo Fisher 49i Ozone analyzers. Instrumentation work: electronic component repair, soldering, pump replacement, clearing blockages in small capillaries inside instrumentation, fabrication of needed ancillary or auxiliary parts in a machine shop when needed.

Team lead on the implementation of a new data acquisition system of Virginia's air quality network. Primary interface between the team and the vendor. Provided training to technical staff for the transition to the new system.

Contributor to ensure staff met data quality objectives and quality assurance goals, through standard operating procedures (SOP), quality assurance project plans, and maintaining NIST-traceability during calibrations, verifications and implementing of a new electronic logbook for site visits. Lead author for the meteorological instrumentation SOP.

Computer programming (python scripts) to improve the workflow of the group. Such as: a python script to sync the time on Particulate Matter (Partisol 2025) samplers, a python script to read the data files of the Vaisala Ceilometer (netCDF format) and send an image to the air quality forecasters; and a python script that evaluates automated calibration QC results and sends email alert when the error tolerance is exceeded.

Teamed with researchers from NASA-Langley to install low cost air sensors and performed data analysis.

Collaborated with my team on difficult instrumentation issues, such as: troubleshooting the source of impurity in standard gas and manufacturing solenoid valves for automated quality control checks.

DESKTOP SUPPORT TECHNICIAN, ROBERT HALF TECHNOLOGIES – 2013-2015

Windows computers diagnostic and repair. Active Directory administration. Configuration of administrative IT systems (e.g. Cisco Phone network). Windows 7 certification. Help Desk first and second levels. Repair of laptops and desktop hardware (including swapping hard drives, screens, and motherboards). Upgraded two entire school buildings computer inventory from Windows XP to Windows 7.

## **COMPUTER SKILLS**

Proficient in python and FORTRAN programming;

Familiarity with JAVA, R, and web development (HTML) languages;

Proficient in working with Linux Operating System, including Ubuntu and Raspbian. Built a weather database for a personal weather station running on a Raspberry Pi;

Proficient in data analysis of various meteorological data formats: compare radar data (from NCEI) to surface rainfall data; compare Aerosol optical depth measurements (from NASA -MODIS) to in-situ particulate matter measurements.

## **EDUCATION**

Iowa State University, Ames, IA – Bachelor of Science in Meteorology (2013)

## **VOLUNTEERING WORK**

PRESIDENT, CENTRAL VIRGINIA CHAPTER OF THE AMERICAN METEOROLOGICAL SOCIETY – 2018-PRESENT

Lead chapter meetings, recruit speakers to present at our meetings, encouraged members to be life-long students of science, and engaged the public through science fairs and school science days. Lead the chapter through the process of legally organizing in Virginia and pursuing non-profit designations. Gave a presentation at a meeting about the history of hurricane forecasting in the United States from the research I performed out of my own curiosity.

OFFICE COORDINATOR, COMMONWEALTH OF VIRGINIA CAMPAIGN 2016 – PRESENT

The Commonwealth of Virginia Campaign (CVC) is the fundraising campaign of the employees of the Commonwealth. I have had the honor of coordinating the Office of Air Quality Monitoring's CVC activities. Together with the regional office next door, we fundraise for local charities through activities such as a silent auction and bake sales that have generated over \$1,500 per year of charitable giving.