

<html> Michael Levine </html>

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<https://mikelevinewx.dev>

Summary of Experience	Meteorologist and scientific programmer with 7+ years of experience supporting NOAA contracts, including MDL, AWIPS, and SAB. Adept at full-stack development, automation, and real-time system support for weather verification and satellite analysis applications. Strong communicator with expertise in Linux systems, Agile workflows, and operational script development.
Education & Certifications/ Training	<ul style="list-style-type: none">▪ Bachelor of Science, Meteorology, The Pennsylvania State University, 2017▪ SKYWARN Spotter Advanced Severe Weather Training▪ Raytheon/AWIPS Basic Engineering Course (BEC)▪ SAB Tropical, Precipitation, Volcano and Fire Desk Certification▪ AWS Certified Solutions Architect Associate (In Progress)

EXPERIENCE

Ace Info Solutions/Guidehouse/Arch Systems

Scientific Programmer III, NOAA-MDL

September 2021 – present

- Led full-stack development of MDL's NDFD-Stats Viewer, utilizing PHP, SQL, Python, Bash, and JavaScript (jQuery) to build robust back-end and interactive front-end features.
- Collaborated in Agile Scrum teams, delivering iterative feature rollouts aligned with stakeholder needs.
- Developed and optimized automation scripts in Python and Bash to streamline verification data ingestion and troubleshoot data processing workflows.
- Leveraged Large Language Models (LLMs) to enhance algorithm development and accelerate the creation of utility scripts.
- Demonstrated expertise in web technologies, including HTML/CSS, JavaScript/jQuery, PHP, and PostgreSQL, for dynamic web application development and database integration.
- Interned with Ace Info Solutions (2017) in support of MDL operations; gained hands-on experience in SQL, PHP, HTML/CSS, and JavaScript for daily software development tasks.

Scientific Programmer Intern, NOAA-MDL

May 2017 – August 2017

- Utilized SQL to create and populate a table in one of MDL's (Meteorological Development Laboratory) PostgreSQL databases.
- Self-taught shell (bash) scripting and applied skill to write a script that calculates MAE (Mean Absolute Error) and Brier scores for NDFD (National Digital Forecast Database) and MOS for multiple weather variables, automatically twice a year (after each cold and warm season). This script then populates an SQL table.
- Developed an online GUI for NWS forecasters, using PHP, HTML/CSS, and JavaScript, to access and plot data from the SQL table.

ERT/EMCS Inc.

June 2020 – September 2021

Scientific Programmer II, NOAA OSPO-SMOMS-SAB

- Supported the Satellite Analysis Branch (SAB)'s mission by providing new proof of concept satellite analysis techniques needed to support disaster mitigation and warning services for U.S. Federal agencies and the international community.

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- Analyzed satellite and ancillary data to create interpretive satellite-based products, as well as utilizing applications of remote satellite sensing in meteorology, oceanography, and other physical sciences.
- Successfully completed all SAB desk certifications remotely—first to do so in SAB’s history.
- Developed and maintained operational scripts for the SAB Tropical Desk, enhancing storm monitoring capabilities.

RCG Inc./GAMA-1 Technologies

March 2018 – June 2020

Jr. Meteorologist/Linux Administrator, NOAA AWIPS Contract

- Provided user support to clients to solve their AWIPS-related issues, working in a 24x7 support environment.
- Developed multiple scripts/applets (written in Python/Bash) to aid in streamlining daily workflow, all of which were developed from scratch and purely by choice.
- Exhibited strong adaptability, tackling many different issues on the spot, as they arose for clients.
- Developed a strong background in the AWIPS infrastructure and how to solve many of the issues that its clients face.
- Managed data flow and critical processes at around 150 National Weather Service (NWS) offices, each hosting around 15 servers.
- Closed over 5000 *BMC Remedy* trouble tickets, tackling issues related to file systems, file permissions, data flow, user profile, environment, script syntax, and many other AWIPS/Red Hat Linux-related issues.

RELEVANT TOOLS & TECHNOLOGY

- *Operating Systems*: Red Hat Enterprise Linux 7, Microsoft Windows, Mac OS
- *Programming Languages*: Python, Bash, HTML/CSS, Javascript/JQuery, PHP, C++, Matlab
- *Relevant Architecture*: Amazon Web Services (AWS) (EC2, S3, RDS), Digital Ocean
- *Development Methodologies*: Agile-Scrum
- *Database*: PostgreSQL, MySQL
- *Artificial Intelligence (AI)*: Large-Language-Models (LLMs)