

Brock Burghardt, PhD, CCM

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Salt Lake City, UT 84101

PROFESSIONAL EXPERIENCE

Meteorologist June 2020 – present

National Weather Service, Salt Lake City, UT

- Produce public and aviation forecasts.
- Assess and take over machine learning flash flood prediction model.

Senior Data Scientist March 2019 – May 2020

Data Scientist September 2018 – February 2019

Progrexion, Salt Lake City, UT

- Manage multiple projects and data scientists within the marketing analytics group.
- Consult with other internal departments and deliver inferential and predictive models.
- Develop, deploy and report on machine learning models helping to improve operations efficiency.

Meteorologist and Owner May 2018 – present

Burghardt & Associates, LLC, Park City, UT

- Manage and deliver on all projects and contracts.
- Develop and maintain international numerical weather modeling projects.

Meteorological Developer April 2017 – April 2018

Weatherbell Analytics, New York City, NY (remotely based in Park City, UT)

- Collaborate with partner companies for new weather products.
- Run and maintain numerical forecast models, including on multiple cloud computing platforms.
- Develop new weather products with various models (global, seasonal, climate) using multiple correction methods.

Research Assistant August 2013 – April 2017

Texas Tech University, Lubbock, TX

- Running, testing, and verifying ensemble forecasts with a WRF-DART system.
- Collaborate, develop and maintain severe weather processing and plotting for the TTU real-time ensemble.
- Present performance results from research and real-time ensemble forecasts at numerous conferences and workshops.

Meteorologist June 2009 – July 2013

Innovative Weather, Milwaukee, WI

- Produced client-based forecasts customized for the following industries: utilities, education, radio, transportation.
- Provided risk assessment and forecast dissemination for high impact weather events (severe storms, winter weather).

Research Assistant/Teaching Assistant 8/2011 - 7/2013

University of Wisconsin-Milwaukee, Milwaukee, WI

- Ran model simulations for collaborative project on meteotsunamis in the Great Lakes.
- Completed Masters research project on the predictability of convection initiation in the central high plains.

EDUCATION

Texas Tech University, PhD in Atmospheric Science - February 2017

Dissertation: Performance Characteristics of Convection-Allowing Ensemble Forecasts with Varied Physics.

University of Wisconsin-Milwaukee, Bachelors (Math Minor), Masters in Atmospheric Science - May 2011, 2013

Thesis: Assessing the Predictability of Convection Initiation Using an Object-Based Approach.

Certifications

Certified Consulting Meteorologist

American Meteorological Society, January 2019

Programming Experience

Advanced: Python (7 years), Matlab (5 years), Fortran (4 years), SQL (1.5 years).

Intermediate: R (1.5 years), LabVIEW (1 year), TensorFlow (0.5 year).

References

Ancell, Brian

Professor, Texas Tech University

806-834-3143 (office)

Coxworth, Ted

Senior Director of Analytics, Progrexion

801-512-9449 (personal)

Salem, Bassam

CEO, AtlasRTX

435-647-6262 (personal)

Shanahan, Mike

COO, Weatherbell Analytics

917-751-9695 (personal)