Hunter R. Merrill

Principal Data Scientist
Columbus, OH
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Updated: 31 May 2025
My web-based CV can be found at hrmerrill.github.io.

Biography

I am a results-oriented technical lead committed to solving real-world problems with data science. I have 8+ years experience in predictive modeling and 3+ years experience leading cross-functional teams, and extensive experience with advanced statistical & machine learning methods including Bayesian modeling, deep learning and probabilistic forecasting. I have authored multiple peer-reviewed publications and patents.

Experience

Climate LLC / Bayer

Principal Data Scientist, Sustainability Modeling Team / SEPTEMBER 2024 - PRESENT

I lead agile teams to deliver ML-enabled tools and software. I manage projects and am responsible for influencing the strategic direction of the business unit and for defining quarterly milestones and two-week deliverables, and for working with commercial teams to align software development with business goals.

- Improved field boundary management experience by developing and deploying a QGIS plugin.
- Automated practice change evidence verification by developing and deploying image- and text-classification neural network models.
- Explored efficient and compliant AI tools by fine-tuning and in-house hosting agent- and RAG-based LLM frameworks for natural language queries of carbon market registry documentation.

Lead Data Scientist, Environment Modeling Team / NOVEMBER 2020 - SEPTEMBER 2024

I led agile teams to deliver predictive models for crop diseases. I was responsible for defining scientific strategy, quarterly milestones and two-week deliverables, and for working with commercial teams to align scientific research with business goals.

- Enabled crop protection insights by developing and deploying a deep learning gaussian process model for jointly forecasting multiple diseases.
- Improved data collection efficiency by defining a data valuation strategy & hiring two contractors to execute on it.
- Identified and addressed the risks of collecting more of the same data across programs.

Senior Data Scientist, Environment Modeling Team / APRIL 2018 - NOVEMBER 2020

- Created in-season wheat disease forecasts by developing probabilistic deep learning models.
- Improved crop yield models by creating deep learning embeddings of high-dimensional environmental data.
- Mentored an intern to develop probabilistic deep learning models to forecast soybean yield over long lead times.

Geospatial Statistician, Seeds & Placement Team / MAY 2017 - APRIL 2018

Identified crop nutrient deficiencies in soil by developing predictive statistical models using satellite imagery.

Freelance

Grant Review Panel Member, USDA / 2024 - 2025

Reviewed grant proposals for the USDA's Data Science for Food and Agriculture Systems awards.

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Education

University of Florida

PhD, Agricultural and Biological Engineering (Statistics Concentration) / MAY 2014 - MAY 2018
MStat, Statistics / AUGUST 2012 - MAY 2014

Mississippi State University

BS, Mathematics / AUGUST 2008 - MAY 2012

Service

Taimaka (May 2025 - Present). Responsible for deploying and automating machine learning models that predict poor health outcomes of patients.

UF ABE Advisory Board (3-year term, 2022-2025). Responsible for advising on the University of Florida Agricultural & Biological Engineering department's mission statement and strategy, as well as ensuring curricula result in successful placement of graduates.

Tech Stack

Programming: Python, Bash, Javascript, HTML, CSS, R, C++, SQL, Spark, Git
Machine Learning: Tensorflow, TF Probability, Sagemaker, Scikit-Learn
Publishing / Presenting: LaTeX, MS Office, Google Suite

Papers & Patents

Selected Papers

- Forecasting urban household water demand with statistical and machine learning methods using large space-time data: A comparative study. DOI 10.1016/j.envsoft.2018.01.002
- Spatiotemporal additive regression model selection for urban water demand. DOI 10.1007/s00477-019-01682-2
- Semiparametric regression models for spatial prediction and uncertainty quantification of soil attributes. DOI 10.1007/s00477-016-1337-0

Selected Patents

- Systems and methods for rendering disease data for agricultural fields through improved interfaces. Provisional.
- Systems and methods for treating crop diseases in growing spaces. Provisional.
- Digital modeling and tracking of agricultural fields for implementing agricultural field trials. Patent no. US-20200272971-A1
- Systems and methods for use in application of treatments to crops in fields. Patent no. US-20230035413-A1
- Automatic prediction of yields and recommendation of seeding rates based on weather data. Patent no. US-20200042890-A1

Hobbies

I build guitar effects pedals and I dabble in lutherie. I also enjoy hiking, indoor rock climbing and hanging out with my cats. I've placed 7th out of 92 in a Kaggle competition. I've recently gotten into endurance training and I keep a statistics-heavy training journal. I also developed a web app to schedule and plan training sessions around bad weather and air quality.