Stephanie Abegg

Data Scientist & Mathematics Specialist

sabegg@gmail.com • (360) 710-4152
Estes Park, CO
LinkedIn • GitHub • Personal website

A seasoned and detail-oriented professional with expertise in data science and mathematics, I am skilled in collecting, manipulating, analyzing, and interpreting complex data sets, developing analysis tools, deriving actionable insights, and driving informed decision-making. I excel in numerical methods, statistical analysis, mathematical modeling, predictive analytics techniques, and coding. I am adept at conveying technical concepts to non-technical stakeholders with clarity through teaching and communication.

Areas of Expertise

Coding: Python, NumPy, Pandas, Matplotlib, R, Matlab, SQL, NoSQL, Postgres/pgAdmin, MongoDB, JSON, APIs, HTML, CSS, Javascript, Leaflet.js, Tableau, Hadoop, TIBCO Spotfire, Excel (VBA scripting, pivot tables, forecasting, statistical modelling)

Disciplines: Big data, data science, data analysis, data visualization, data quality assurance, risk assessment and mitigation, machine learning, data ethics, statistics, mathematics, mathematical concept instruction

Methods: Numerical models, mathematical models, statistical analysis, time series analysis and forecasting, predictive analysis, nonlinear optimization, multilinear regression models

Professional Experience

Monitoring & Data Analyst – LongPath Technologies, Boulder, CO **2022–Present**

- Analyze and ensure data quality for advanced methane gas emission continuous monitoring systems across the country, by leveraging tools such as TIBCO Spotfire, Excel, and MongoDB.
- Use numerical and statistical methods to design innovative data analytics tools to pinpoint emission sources and detect anomalies.
- Communicate analysis results and emission summaries internally and with clients, using data visualizations presented both orally and via written reports.
- Spearheaded project to validate anemometer data against local weather data for discovery and rectification of data inconsistencies.
- Used conditional probability to solve a puzzle of correlating flyover emissions with high-precision continuous monitoring data.

Adjunct Math Instructor – Western Washington University, Bellingham, WA **2014–2019**

- Instructed a range of mathematics courses, including Algebra, Precalculus, Single- and Multi-variable Calculus, and Discrete Math, over a 5-year period as full-time instructor in a university math department.
- Facilitated student understanding of complex mathematical concepts through clear explanations and interactive learning techniques.
- Developed comprehensive lesson plans and assessment tools to track and enhance student performance.

Research Engineer – Janicki Industries, Inc., Sedro-Woolley, WA **2011-2012**

Junior Geotechnical Engineer in Training – Golder Associates, Ltd, Abbotsford, BC **2007-2008**

Junior Civil Engineer in Training – Dayton & Knight, Ltd, Abbotsford, BC **2006-2007**

Interesting Personal Projects

- Recently I have been working on a personal pet project of developing a machine learning model to predict the day-to-day and long-term performance of various markets. So far I have achieved a “better than a wild guess” but not an “I can now retire” performance.

Degrees and Certificates

Data Analytics Bootcamp, University of Denver, Denver, CO **2024**

MS, Applied Mathematics (Statistics & Data Science Track), University of Colorado, Boulder, CO **2022**

MS, Mathematics, Western Washington University, Bellingham, WA **2014**

MS, Civil Engineering, University of Washington, Seattle, WA **2010**

BS, Engineering Geology & Hydrogeology, Stanford University, Palo Alto, CA **2006**