

Michael McCarthy

Helena, MT | [LinkedIn](#) | [Portfolio](#)

WORK EXPERIENCE

MT Governor's Office, Office of Budget and Program Planning

Helena, MT

Budget Data Analyst (Special Projects Lead)

March 2024 - Present

- Developed advanced Excel-based budgeting validation tools, saving 300+ employee hours per budget cycle.
- Modified and implemented the statewide technology expenditure reporting system, including data collection, validation, and visualization, ensuring accuracy and transparency across all state agencies.
- Created comprehensive documentation detailing the structure and processes of in-house budgeting databases.
- Serve as the IBARS System Administrator and Manager for the Governor's office, overseeing system functionality, user support, and reporting processes to streamline budget management.
- Utilize SQL to query and analyze large datasets, enabling data-driven insights for budget planning and forecasting.
- Build and maintain Excel and Access databases and tools for budget building and development, optimizing efficiency and accuracy in financial planning.

Utah DHHS, DCFS

Salt Lake City, UT

Research Consultant II (Data Unit Co-Lead)

2023 - 2024

- Developed real-time ad hoc analyses in PostgreSQL and dynamic dashboards in AWS QuickSight, equipping division directors and legislators with actionable insights that informed key legislative decisions.
- Enhanced data accessibility by designing and implementing compliant data storage protocols, improving operational efficiency for 500+ state employees while ensuring data security.
- Revamped the DCFS quarterly report into a comprehensive, user-friendly tool, providing critical insights for internal decision-making and external stakeholders.
- Led statewide analyses to track RBA goal progress, creating automated QuickSight reports that became essential tools for internal decision-making and external stakeholder engagement.

Teaching (Hillcrest High, South Davis Jr. High)

Salt Lake City Area, UT

Math Teacher

2019 - May 2023

- Directed the development and implementation of the Secondary Math 1 curriculum as the 2021-2022 Curriculum Team Leader, leading a team of six educators to improve overall student achievement.
- Designed and executed a department-wide ACT ASPIRE preparation program by analyzing performance data using Excel (pivot tables, Power Query, formulas, charts) to monitor and enhance student outcomes.
- Improved homework completion rates by 27% and assessment scores by 8% across six classes through a data-driven strategy that tracked student progress and optimized competition effectiveness using Excel.
- Utilized Excel to analyze and track student performance, leading to a 14.5% outperformance of the 9th-grade average and a 7% increase in students reaching "Proficient" levels on state tests.
- Leveraged cross-functional collaboration skills to create and implement a data-driven Math course for 50+ refugee and immigrant students, later adapting the approach for English and Science courses.

EDUCATION & CERTIFICATIONS

Georgia Institute of Technology

Remote

MS Analytics (Data Science)

2023 - Present

- Machine Learning | Statistics | Optimization | Advanced Modeling Techniques
- Python | R | SQL

Villanova University

Villanova, PA

B.S. Mathematics

2017

- Research in Cryptanalysis & Financial Derivatives Modeling.
- 4-year member, recruiter, and lead fundraiser of the Villanova University Men's Rowing Team.

Towson University

Towson, MD

M.A. Teaching

2019

SKILLS

Skills: SQL | Statistics | Excel | Tableau | AWS Quicksight | Python (developing) | R (developing) | Spanish (Intermediate)