

Corey Solitaire

Data Science / Analytics

(210) 243.9573 | corey.solitaire@gmail.com | www.linkedin.com/in/corey-solitaire | github.com/CSolitaire

Professional Profile

I am an experienced and detail-oriented data professional with a deep understanding of real-world applications for statistical analysis. Through my fifteen years in educational leadership, I have developed effective communication skills and am team member who contributes with thoughtfulness. Meaningful collaboration with partners is central to my professional values. My versatile skill set allows me to use data science as a means to provide actionable insights and results for optimized business applications.

Technical Skills

SQL | Sequel Pro | Machine Learning | Python | Tableau | Git | Apache Spark | Scrum | Excel | Statistical Analysis | Research | Remote & E-Learning/Teaching | Data Storytelling | Applied Statistics | Pandas (Software) | Seaborn | Git | Jupyter Notebook | Microsoft Suite | Google Suite | Tableau | MySQL | Natural Language Processing (NLP) | Anomaly Detection | Predictive Modeling | Social Media | VBA (Visual Basic)

Analytical Skills

Research | Forecasting | Machine Learning Pipeline | Visual Storytelling | Problem Solving | Reporting | Project Management | Data Visualization | Communication |

Recent Data Analytics Projects

Program Dashboards: GME Program Oversight

Feb. 2022 - Ongoing

Maintain, improve, and develop reporting tools utilizing data elements from a variety of internal and external data sources (GME RMS and other database systems) to track adherence to ACGME institutional requirements, ACGME CLER Pathways to Excellence, and to support the annual GME institutional report and GME programs' annual evaluations.

A Tale of Two Cities: Social Vulnerability and COVID Infection Rates

Nov. 2020 – Jan. 2021

Our team evaluated the effectiveness of utilizing the CDC's Social Vulnerability Index (SVI) as a tool to predict COVID cases in San Antonio and Dallas, Texas. Understanding if SVI accurately predicts pandemic impact is critical for ensuring vulnerable populations do not miss out on critical resources. Additionally, knowing which features within the index are most predictive will aid officials in targeting resources to vulnerable communities.

Topic Modeling: Geology Current Trends

Dec. 2020

Utilizing web scraping and topic modeling I was able to identify current trends in geologic research. A function was developed that takes in a list of GitHub URL addresses and collects README text data and the repository's primary programming language. Topic modeling was performed using the Latent Dirichlet Allocation (LDA) class from the Scikit-Learn decomposition library. Five trends were identified in the corpus over the course of two rounds of modeling, with trend association becoming clearer when common words were removed.

Anomaly Detection: Data Access and Security**Nov. 2020**

Explored two years of website log data to uncover trends and identify trends in curriculum demographics and anomalous events regarding curriculum access and security. As a result of this analysis, six specific user ids and several IP addresses were flagged as nefarious saving the organization time, money and peace of mind.

Natural Language Processing: Battle for the Most Popular Language**Nov. 2020**

My partner and I scraped 100 GitHub repository URLs to create a dataset for analysis for this project. We used NLP techniques to explore and build a model that would predict the programming language of the repository based on the text in the README.

Zillow Clustering and Regression Projects**Oct. 2020**

This project was completed in two iterations. In the first iteration, my partner and I created a regression model built on property data between May and June 2017 to predict home value. Our best performing model was a polynomial linear regression model which provided a 31% improvement over baseline. In the second iteration, I worked with the KMeans clustering algorithm to build a model that would better predict the Zestimate error in the Zillow data.

Student Success Metrics for TEKS Biology Standards.**2015-2020**

Long term data analysis of STARR Biology performance by individual performance, per TEK, per assessment to measure student understanding and performance over time. I looked at individual cohort performance over a series of years to present a full picture of campus and educator growth in order to identify best practices. Data was disaggregated by demographic and socio-economic status to illustrate trends in camps performance.

Professional Experience**Data Analyst (GME), University of Vermont Medical Center, Burlington, VT****2021- Present**

Accountable for the use and oversight of data management tools and analysis of information to support Graduate Medical Education (GME). Responsible for identifying actionable solutions to achieve the Accreditation Council for Graduate Medical Education (ACGME) Clinical Learning Environment Review (CLER) Pathways to Excellence and to support the national ACGME accreditation for UVM Medical Center as the Sponsoring Institution and its GME residency and fellowship programs. Perform tasks including monitoring GME performance trends, evaluation of current and new ACGME accreditation standards to identify areas for program improvements, and management of data integrity in the GME budget process. Additionally responsible for the production of data presentations for the GME oversight process, GME Committee (GMEC), each program's ACGME Self-Study process, and for the annual Program Evaluation Committee meetings required by each GME program. Proactively identifying issues and opportunities to enhance data management and reporting efforts for GME, and serve as a system analyst for the GME Residency Management System (RMS). Manage a broad range of responsibilities associated with developing, implementing, testing, monitoring, training, and ensuring data integrity for the GME RMS.

Lead Science Educator, Northside Independent School District, San Antonio, TX**2013-2020**

Specialty trained in collaborative teaching focused on special education and English language learner (ELL) populations. Responsible for data collection, analysis, and database management for specialized end of year formal state assessment (STARR). Recognized by peers and administration and appointed to district data leadership team. Deeply committed to optimizing project outcomes with an innate ability to connect, engage and build relationships. Planned, taught, assessed biology students in accordance with the TEKS standards. Adapted IEPs for all students needing intervention and regularly communicated with other stakeholders. Received CPE training ESL, working with special populations, curriculum and assessment. Managed microbiology laboratory focusing on inventory, budgeting, safety and training.

Science Educator, Eleanor Kolitz Academy, San Antonio, TX**2011-2013**

Curriculum development lead and science educator for private school focused on academic excellence. Developed, corresponded and oversaw mentoring local science fair mentorship program. Data collection and database management for donations, fundraising, and resource allocation. Managed budget and inventory for science department programming.

Science Educator, Missisquoi Valley Union High School, Swanton, VT**2010-2011**

Instructor for high school science program. Mentor, instructor and supervisor of Agricultural science program, including management of barn and livestock. Responsible for data collection and database management for FFA corporate sponsorships, as well as grant writing, funding and allocation. Faculty advisor for FFA program.

AmeriCorps, Morris Farm Trust Nonprofit, Wiscasset, ME**2008-2009**

Managed administrative and programmatic side of an agricultural education program for local students and community. Oversaw database and communication with donors, volunteers and board members. Developed and implemented engaging educational programs for adult and children about sustainable agriculture and garden practices. Managed grant allocation, program budgets and evaluation of programs. Quarterly presentations to stakeholders on the status of programs, volunteers and anticipated growth.

AmeriCorps, Reading Interventionist, Austin, TX**2009-2010**

Early literacy intervention and grant programming oversight. Data entry and database management for refugee program. English language learner instructor and mentor. Educational consultation in science curriculum for AISD. Responsible for the collection, management and compliance of grant-based funding program. Over 14,000 documented hours of reading intervention and assessment for refugee students. Documented and presented on student growth in reading to district representatives, caregivers and educators.

Graduate Teaching Assistant, University of Vermont, Burlington, VT**2005-2008**

Instruction and assessment for College of Arts and Sciences. Data entry and database maintenance for landscape change program. Program evaluation and analytics geology department graduate program. Mentored and taught university undergraduate students in Introduction to Geology courses and experiential research program in Colorado. Field assistant for graduate students in Chesapeake Bay looking at isotope analysis and quartzite.

Education

Codeup | San Antonio, TX | Certificate of Completion in Data Science & Analytics, 2021

University of Vermont | Burlington, VT | M.S. in Geology, 2005-2008

University of Vermont | Burlington, VT | B.S. in Education, Cum Laude, 2001-2005

Bellows Free Academy | St. Albans, VT | Graduated 2001

Skill Endorsements

SQL Gold Badge in Hacker Rank | Issued 2020

Gold Badge in Python in Hacker Rank | Issued 2020

Vermont Educator License for 7th-12th | Issued 2005

Texas Educator License for 9th-12th | Issued 2011

Publications & Presentations

Teaching Evolution with Paleontological Data: A Web Resource for Professional Educators

Spring 2008

Masters dissertation focused on the development and assessment of a distance-learning tool, consisting of a web-based teaching module designed around fossil data from a subset of Kelley's (1989) study of the molluscan fauna of the Chesapeake Group. Presented at the Northeast Geologic Society of America conference, 2008.

Interpersonal Strengths

Effective time management | Professional presentation style | Approachable and direct communication | Experienced team leader and mentor | Self-motivated achiever | Highly collaborative | Lifelong learner | Community service-oriented

Personal Interests

Health & fitness | Guitar | Programming | Animal husbandry | Rocks & fossils | Woodworking | Hiking | Gardening