

# Debra Brewer

Columbia, MD • 602.578.3687 • AnalystDebra@gmail.com

[www.linkedin.com/in/debrabrewer](https://www.linkedin.com/in/debrabrewer) • [debrabrewer.github.io](https://debrabrewer.github.io)

## EDUCATION

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Texas A&M University, Master of Science, GPA: 3.8	2017
Major: Mathematics	
Barton College, Bachelor of Science (Double Major), GPA: 3.97, Summa Cum Laude	2017
Major: Deaf & Elementary Education, Cognate: Mathematics, Minor: History	

## SKILLS

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### Tableau

**SQL:** SQL Server, MySQL, PostgreSQL

**Python:** Libraries: Pandas, Matplotlib, NumPy

**Excel:** Tools: VLookup / HLookup, Conditional Formatting, Pivot Tables)

## PROJECTS

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### Post-COVID Layoffs Cleaning and Analysis • Personal Project 2024

- Utilized **SQL** (mySQL) to clean and analyze almost 2000 records of company layoff to gain insights into job market post-COVID
- Data cleaning: removing duplicate rows, standardizing data (trimming, fix naming conventions, change date format), **Inner Join** to populate null data sets, remove unneeded rows and columns
- Data Analysis: determine companies that failed, created column of "Rolling Total of Layoffs", determined top 5 companies for layoffs by year, examined industries/countries/years with max layoffs
- Skills used: **CTE**, Windows Functions (including **partition over**), create/insert/update/delete/alter table, subqueries, data filtering and sorting, inner join, aggregate functions

### COVID-19 Infections, Deaths, and Vaccinations-Analysis and Dashboard • Personal Project 2024

- Utilized **SQL** (SQL Server) to analyze two 85,000 record tables (deaths and vaccinations from COVID) and **Tableau** to visualize that analysis
- Data Analysis: highest percentage/number of deaths by country and continent, explore global number of deaths and rolling deaths, explore number and percent of people vaccinated per country
- Skills used: **subquery**, CTE, **temp table**, inner joins, **windows and aggregate functions**
- Tableau: Visualize global numbers, bar graph of deaths by continent, interactive colored map with percentage infected by country, line graph of percent infected by date and continent

### Nashville Housing Data Cleaning • Personal Project 2024

- Utilize **SQL** (SQL Server) to clean 56,000 listings of Nashville housing data
- Data cleaning: Split address into parts, standardize data, remove duplicates
- Skills used: alter/update table, case statement, substring & charindex OR **parsename**, CTE

### Movie Revenue Analysis • Personal Project 2024

- Utilize **Python** (**Pandas**, **NumPy**, **Matplotlib**, **Seaborn**) to analyze 7500+ movie listings to gain insight into what drives gross movie revenue
- Clean data: dropping rows with nulls, change data types, and obtain year from date released
- Analyze the relationship between gross movie revenue vs budget, ratings, and popularity using a **correlation matrix** and **heatmap**
- Determine budget and gross revenue had the highest correlation (0.74) and used **Seaborn** to create a **scatterplot** with **line of best fit** to visualize the data

## EXPERIENCE

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**Math and Computer Science Educator • Sandy Spring Friends School** **2020-2023**

- Taught **Java** Programming/Computer Science class
- Used **data-driven techniques** to communicate learning to students and plan curriculum
- **Communicated** within 24 hours to parents and other stake holders to ensure student success
- Developed the curriculum for Geometry and Algebra 1: **PPT/Google slides**, assignments, rubrics

**Math Educator • Baltimore County Public Schools** **2018-2020**

- Integrated technology using **programming skills** to create individualized learning modules
- Continually **analyzed** student's success and needs with data-driven

**Math Educator • Legacy School (Sykesville, MD)** **2017-2018**

- **Integrate technology** into curriculum - personalized learning modules to improve critical learning
- Regularly **benchmarked** students to determine progress, growth, and areas of need
- **Team-based approach**; coordinated plan for improvement with all staff and parents

**CEO and Owner • Sharpen Up Tutoring, LLC** **2008-2017**

- Created sought after business while leveraging time and fee structure
- Maintain **communication** with students, parents, and teacher to ensure academic success
- **Integrate technology** into sessions to assess and improve understanding and retention

**Computer Science Curriculum Developer, Part Time • Shodor Foundation (Durham, NC)** **1999-2002**

- **NSF** grant to develop online **computational science** curriculum materials for DHH students

## PRESENTER

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**Super Computing 2001 • Education Program (Denver, CO)** **2001**

- **Taught** two classes in computation science at a **national convention**

## AWARDS

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**AMATYC Student Mathematics League** **2013**

Highest scoring female in the southwest region

**Delta Kappa Gamma International Society Award, Gamma Mu Chapter** **2002**

Highest GPA in school and graduating class