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# **DEREK WILLIAMS**

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#### **SKILLS**

**Programming Languages:** Python, C#, Java, R **Cloud/Big Data:** AWS, Redshift, EMR, RDS, Hadoop, Spark **Databases:** SQL Server, MongoDB, Cassandra, Postgres **Tools:** Git (Git Flow), Apache Airflow, Tableau, Jenkins

#### **WORK EXPERIENCE**

### Center for Prevention Research and Development (Champaign, IL)

Sep. 2017 - Present

Software Developer

- Oversaw full lifecycle software development developing REST web apps with ASP.Net, C#, and MVC architecture.
- Created hundreds of queries, views, and stored procedures across multiple databases using T-SQL and SQL Server 2016 to ensure high-quality data aggregation, manipulation, and selection by CPRD coordinators.
- Implemented rigorous testing solutions utilizing cross-platform testing frameworks like Ginger and NUnit.
- Utilized modern coding frameworks like jQuery and Angular to improve legacy code and increase performance.

### II-VI Epiworks (Champaign, IL)

Jan. 2017- Aug. 2017

Analyst

- Analyzed yield for silicon wafers with Excel tools including Pivot Tables, VBA, and Vlookups.
- Developed SQL queries targeting millions of rows of data to view, store, and analyze sensitive data.
- Performed advanced statistical tests using JMP to deliver insights from large datasets.

### Jimmy John's (Champaign, IL)

May 2014 - Aug. 2014

IT Intern

- Developed intranet mobile-ready web sites with C#/ASP.NET.
- Created front-end dynamically responsive pages using HTML/CSS and Bootstrap.
- Utilized JavaScript frameworks like jQuery and Angular to assist the IT staff in web projects as needed.
- Maintained database security and referential integrity by creating tables and database relationships with T-SQL and SQL Server 2012.

#### PROJECT EXPERIENCE

#### **US Immigration ETL**

May 2020

- Created an end to end ETL Pipeline extracting 1994 US Immigration data to AWS S3 and AWS Redshift
- Implemented Python and Apache Airflow to schedule and execute DAG's
- Incorporated Apache Spark to transform and manipulate data for AWS storage

### **Stack Exchange Data Science Questions Popularity**

March 2020

- Performed aggregate analysis of data science question popularity from Stack Exchange on Jupyter Notebook
- Built multiple graphs with Seaborn and performed data cleaning/manipulation with Pandas

## **Linear Regression Analysis of 2016 Election**

Aug. 2019

- Programmed in R to analyze results of the 2016 Presidential Election by multiple factors including socioeconomic status, education, and geographic area
- Utilized multiple statistical analytical methods including ANOVA and linear regression to validate and compare predictors

#### **EDUCATION**

University of Illinois at Urbana-Champaign, Master's in Computer Science, Overall GPA: 3.8

Aug. 2018 - May 2021

Relevant Coursework: Data Cleaning, Data Curation, Text Information Systems,

Cloud Computing Applications, Methods of Applied Statistics in  $\ensuremath{\mathsf{R}}$ 

University of Illinois at Springfield, B.S. Computer Science, Overall GPA: 3.7

Aug. 2014 - Dec. 2016

Relevant Coursework: CS I and II, Linear Algebra, Calc I, II, III, Data Structures, Web Design, Operating Systems, Computer Organization, Database Development