

SARAH JANE FULLERTON

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EDUCATION

Claremont McKenna College

December 2024

Bachelor's Degree

- Major: Data Science
- Relevant course work: Applied Machine Learning, Remote Databases, Foundations of Data Science, Computer Science, and Software Development, Data Structures and Algorithms, Probability, Statistical Inference, Linear Algebra, Discrete Mathematics, Calc: 1, 2, 3

EXPERIENCE

RadNet

May 2024 – Aug 2024

Data Analyst – Internship

- Developed, managed, and implemented various dashboards in Tableau for actionable insights and facilitate data-driven decision-making
- Collaborated with IT and Operations to integrate reports into dashboards for comprehensive data representation
- Trained Strategic Initiatives and Operations teams on dashboard functionality to improve data utilization skills
- Created weekly analytics-based reports and summaries for leadership to optimize performance
- Conducted data management tasks and maintained data retention and integration

Ontario International Airport (ONT)

Jan 2024 – May 2024

Data Science Project Engineer – Contract

- Predict high demand flight routes by developing a demand estimation script leveraging provided data inputs
- Analyze and identify key factors influencing destination demand to extract actionable insights into passenger preferences and travel patterns
- Generate insights to guide strategic decisions for ONT's route expansion and airline engagement
- Evaluate ONT's post-pandemic recovery against peer airports and formulate strategies to retain and attract passenger traffic, emphasizing ONT's advantages and profitability to airlines

RosmanSearch

May 2023 – Aug 2023

Database Management – Internship

- Developed an R program to efficiently filter and process data, meeting specific project requirements
- Generated Salesforce contacts to support the healthcare recruitment team's efforts
- Leveraged R and Excel for daily documentation, tracking progress, and analyzing findings

Inclusive America

Feb 2022 – Sep 2022

Web Development – Internship

- Compile data on current and past government officials and reflect data in Excel and Google Spreadsheets
- Design infographics reflecting data compiled on Excel using Canva editor for IA website and social media in both R and Canva
- Build and establish website using HTML, CSS, JavaScript, WordPress, content entry and block-based editing

Roblox China (Luobu)

May 2021 – Aug 2021

Data Science – Internship

- Worked with team, accessing 20 million lines of data, to produce top 20 Luobu experiences based on view count
- Analyzed logs of data, producing heatmap geolocating Roblox China players
- Helped with English language correspondences, including letters to App Stores (where English was needed) for app review and approval

Kosher Food Pantry

Jun 2020 – Jun 2021

IT Support and Database Management – Volunteer

- Trained and provided technical support to 10 staff and executive committee members on call and as assigned
- Created Excel sheets for new and past donors to distribute to staff while maintaining a user-friendly layout
- Organized and deleted thousands of duplicate database names, improving donor database by configuring email blasts and voicemails

PUBLICATIONS

Extremal Polynomial Norms of Graphs

November 2023

<https://arxiv.org/abs/2311.04689>

Developed new norms on Hermitian matrices using complete homogeneous symmetric polynomials, enabling refined graph distinctions through eigenvalue-based analysis. Proved that CHS norms are minimized by paths and maximized by complete graphs (connected) and by stars (trees). Published findings accessible to a broad mathematical audience.

PROJECTS

Reddit Sentiment Analysis on Hurricane Helene

<https://github.com/sjanefullerton/Sentiment-Analysis>

- Developed a Reddit web scraper using PRAW to collect data, followed by preprocessing and manual labeling of 600 samples
- Trained and Fine-tuned transformer models to automate sentiment labeling, leveraging pandas for data manipulation

Spotify Music Trends Analysis

github.com/sjanefullerton/Spotify-Analysis

- Explored trends in Spotify top 200 global dataset, including audio features, genre evolution, and the impact of COVID-19 on music preferences, using clustering and correlation techniques
- Applied spectral clustering to analyze genre patterns, investigated seasonal and collaborative trends in music, and used random forest regression to explore predictors of song popularity

SKILLS

Programming Languages: SQL, R, Python, Java, JavaScript

Big Data and Machine Learning: PostgreSQL, BigQuery, Linux, Docker, Spark, Data Modeling, Data Mining, Pytorch, TensorFlow, scikit-learn

Visualization: Tableau, Power BI, Matplotlib, Plotly, D3.js, Bokeh, ggplot2

Other: HTML, CSS, Node.js, DevOps, Git, ArcGIS, Stata