

Zhenhui Cathy Trinh

☎ 1-302-559-5401 ✉ cathy.zhenhui@gmail.com in [linkedin/zhenhui-cathy-trinh](https://www.linkedin.com/in/zhenhui-cathy-trinh) 🌐 [Website](#) 🏠 Edmonton, AB

SUMMARY

Results-driven data professional with a comprehensive skill set encompassing data warehouse management, ETL pipeline development, and advanced data analysis. Proven experience in statistical testing, constructing and deploying machine learning models, and creating insightful dashboards to inform strategic decision-making. Well-versed in agile development methodologies and adept at collaborating with multi-disciplinary teams.

SKILLS

- Data Analysis: SQL (Postgre, MS), R, Python, PySpark, BigQuery
- Data Visualization: Tableau, R Shiny, Plotly, Dash, Streamlit, Power BI, Looker Studio
- Other: Git/GitHub/Bitbucket, Shell, Jira, Confluence, Trello, Smartsheet, Microsoft Office suite, LaTeX
- Database management: MS SQL Server, Azure Databricks, Snowflake, AWS RedShift, Google Cloud Platform (GCP)

EXPERIENCE

Infectious Disease Data Scientist | *Government of Alberta* | Edmonton, AB, CAN January 2024 - Present

- Develop and maintain interactive Shiny dashboards to provide real-time, accurate data analysis and interpretation, enabling timely public health surveillance, assessment, and decision-making.
- Oversee the design, implementation, and enhancement of analytical platforms, improving data accessibility and analysis efficiency by 30%, effectively aligning IT capabilities with business area needs for better decision-making.
- Develop and maintain data pipelines and R packages, streamlining data analysis workflows and reducing processing time by 25%. Lead training sessions for over 30 analysts, enhancing team competency in analytical tools and methods.
- Advice leadership on building a sustainable data infrastructure, laying the groundwork for future improvements in data management and long-term system resilience.

Senior Healthcare Data Analyst | *SEIU 775 Benefits Group* | Seattle, WA, USA November 2020 - January 2024

- Developed and monitored a COVID-19 surveillance dashboard in Tableau, tracking infection, hospitalization, and vaccination, providing regular updates and recommendations for organizational pandemic response strategies.
- Developed and maintained ETL pipelines in Azure Databricks, leading to at least 30% increase in data acquisition efficiency.
- Drove value-based purchasing strategy to improve population health by defining measurable goals, metrics, and performance guarantees that leads to 15% reduction in avoidable ED and hospital utilization and 20% improvement in chronic condition management.
- Constructed complex SQL scripts to extract data from the data warehouse for deep dive analyses in R or Python, key projects include:
 - Evaluated ROI of key contracts, resulting in the realization of \$2.5M cost-saving and the optimization of benefits structures.
 - Contributed to successful acquisition of \$34M in monthly state funding to expand healthcare coverage for 25,000 home care aides.

- Proactively performed gap analysis to pinpoint healthcare disparity and collaborate with cross-functional teams to launch targeted campaigns that have successfully improved preventive dental and cancer screening in undeserved communities by at least 25%.
- Enhanced the organization's analytical capabilities by designing and delivering a comprehensive training program that equipped three cohorts of 20+ researchers and program managers with essential data analytic programming skills.
- Produced and delivered quarterly key performance indicators reports to senior leadership and the Board of Trustees, and demonstrated thought leadership and expertise by delivering engaging presentations at industry conferences.

Lead Business Intelligence Analyst | *SEIU 775 Benefits Group* | Seattle, WA, USA June 2019 - November 2020

- Led a team of data analysts and data engineers in the design, development, and testing of a dimensional data model in Snowflake during end-to-end BI development lifecycle, resulting in 80% improved reporting efficiency and accuracy.
- Led cross-functional teams in Agile product development using Jira. Managed requirements, facilitated communication, and provided critical data insights to inform strategic decisions and meet project milestones.
- Developed comprehensive 60-page data mart specification guides on Confluence, featuring ERD, data dictionary, and process flowcharts, leading to a 50% reduction in new employee onboarding time.
- Conducted root cause analyses for system defects, saving stakeholders a combined 100+ manual hours a month.
- Analyzed survey data through text mining and sentiment analysis, driving a remarkable 90% increase in satisfaction.
- Augmented team productivity by 95% by automating repetitive tasks with 150+ R, Python, Shell scripts, and SQL procedures. Enhanced team collaboration by providing Git/GitHub training and generating best practice documents.

Actuarial Data Science Intern | *Milliman* | Seattle, WA, USA May 2018 - June 2019

- Developed ETL pipelines to pre-process and clean data for modeling in 2 large consulting projects on lapse and mortality.
- Performed trend analysis with life insurance data, tuned and deployed machine learning models (e.g. logistic regression, decision tree, random forest, XGBoost) that allows clients to make strategic decisions with high confidence.
- Added interactive features to static graphs in existing applications and improved user experience by incorporating HTML/CSS elements into R codes.
- Partnered with data scientists and actuaries to co-author 2 industry reports and 1 newsletter article within 3 months.

Research Specialist | *Epismart* | Philadelphia, PA, USA March 2015 - April 2018

- Designed experiments and studied the structural properties of the melanin cell using Scanning Electron Microscope.
- Collected and organized research data; generated detailed process documents; conducted statistical analyses in SPSS and produced weekly reports to CEO and produced poster for presentation at the American Society for Cell Biology conference.
- Identified and connected with business partners overseas and successfully reduced operational cost by 50%.

EDUCATION

Master of Science in Bioinformatics	May 2019
<i>Northeastern University</i>	Boston, MA, USA
Bachelor of Science in Health Sciences	May 2016
<i>Drexel University</i>	Philadelphia, PA, USA