

Riley McNair

rileymcnair3@gmail.com | (203) 252-9994 | github.com/rpmcnair | <https://rpmcnair.github.io/Website/>

Technical Skills

Programming & Querying: SQL (advanced), Python, R, Java, C

Data & Analytics: pandas, statistical modeling, hypothesis testing, Power BI

Data Engineering: ETL pipelines, data transformation, reproducible workflows

Databases: Relational design, Oracle SQL, Netezza

Cloud & Tools: AWS (Lambda, S3, Athena, EventBridge, SNS), Terraform, Git

Work Experience

Data Analyst (Co-op), Canada Revenue Agency — Research & Methodology | Vancouver, BC Sept 2024 – May 2025

- Queried and analyzed large-scale relational tax databases containing millions of records using SQL to extract, join, and validate datasets for client-driven analytical projects.
- Used Python for hypothesis testing and statistical analysis to evaluate experimental policy interventions and identify significant behavioral trends.
- Built Power BI dashboards and analytical tables to support experimental nudge letter reporting and monitor filing behavior of hard-to-reach populations.
- Led a student-driven research project analyzing 10 years of longitudinal tax data to assess the impact of the Canadian Workers Benefit on income, employment, and benefit dependency.
- Designed a replicable and automated sampling methodology, enabling reuse for future policy experiments.
- Presented findings to senior leadership, translating complex statistical results into actionable insights.
- Awarded the 'Outstanding Student Award' for analytical performance and leadership.

Technical Projects

Texas Procurement Watch | Personal Project – AWS, Python, Terraform Mar 2026

- Built a serverless data pipeline using AWS (Lambda, S3, EventBridge, SNS) to ingest and monitor public procurement data from the Texas Open Data API.
- Designed a raw data ingestion layer storing timestamped JSON snapshots in partitioned S3 paths for reproducible, auditable data.
- Transformed raw data into structured, queryable datasets using AWS Athena and Parquet for efficient analysis.
- Implemented event-driven ingestion and monitoring workflows using EventBridge scheduling and SNS alerts.
- Developed Python ingestion services (API clients, config, pytest tests) and set up Terraform infrastructure for reproducible deployment.

Ski Resort Database | Academic Project – SQL, Node.js, JavaScript Aug 2024

- Designed and implemented a normalized relational database schema on Oracle, defining entities, relationships, and constraints to ensure data integrity.
- Developed a Node.js interface to support CRUD operations and dynamic querying.
- Wrote complex SQL queries and transformations supporting reporting and analytical use cases.
- Created documentation for schema design and query logic to support maintainability.

Predictive Modelling – Voter Turnout | Personal Project – R Apr 2024

- Built predictive models using statistical and machine learning techniques to estimate voter turnout.
- Conducted exploratory data analysis, feature selection, and model evaluation.
- Applied ridge regression and forward selection to mitigate multicollinearity and improve generalization.
- Interpreted model outputs to identify key socio-political drivers of participation.

Education

Bachelor of Computer Science (BCS), University of British Columbia | Vancouver, BC Dec 2025

Major in Computer Science

Bachelor of Arts (BA), University of British Columbia | Vancouver, BC May 2022

Major in Political Science, Minor in Economics | Graduated with Distinction