

# CODY HOU

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## SUMMARY

- **Data Analyst** with proven expertise in building **scalable ETL/ELT pipelines**, cloud-based data architectures, and high-performance analytics platforms across energy, finance, and public health sectors.
- Experienced in **SQL, Python, dbt, Spark, and Databricks**, with strong proficiency in **Snowflake, BigQuery, and Redshift** for data modeling, transformation, and performance optimization.
- Skilled in designing **data workflows and orchestration** using Airflow and Dagster, ensuring reliability, automation, and compliance across enterprise and government environments.
- Passionate about leveraging **cloud platforms (AWS, GCP, Azure)** and modern DevOps practices (Docker, Kubernetes, GitHub Actions, GitLab CI/CD) to enable **scalable, secure, and production-ready data infrastructure**.

## SKILLS

**Languages:** Python, SQL, R, Bash.

**Data Storage:** BigQuery, Databricks, Redshift, Snowflake.

**ETL & ELT:** dbt, Fivetran, Spark.

**Workflow Orchestration:** Airflow, Dagster.

**Cloud Platforms:** AWS, Azure, GCP.

**Containerization:** Docker, Kubernetes.

**Data Visualization:** Power BI, Tableau.

**Version Control & CI/CD:** Git, GitHub Actions, GitLab CI/CD.

## WORK EXPERIENCE

### Data Analyst

Jun 2025 – Aug 2025

*Renox Technologies*

*Full-Time*

- Built end-to-end **ETL** pipelines integrating data from **AWS Redshift**, SCADA systems, and RESTful APIs into centralized reporting platforms, enabling automated KPI tracking and advanced analytics.
- Designed and automated Python-based data workflows to simulate PV + battery systems, validating results against actual site performance to calculate and benchmark Performance Ratio (PR), with full **version control** and **CI/CD** automation managed in **GitLab**.
- Developed and maintained reports and dashboards, delivering data-driven insights on energy storage solutions, cost savings, and ROI to support customer decision-making.
- **Key Achievements:**
  - \* Helped clients achieve **Net-Zero energy costs**, reducing annual electricity expenditure from **AUD 1.03M** to **Bill Zero**.
  - \* Delivered ROI in just **4 years**, supported by data-driven PV + battery system design and cost-benefit analysis.

### Analytics Engineer

Mar 2025 – Present

*Upwork*

*Remote*

- Engineered and deployed cloud-based data pipelines using **dbt**, **Google BigQuery**, **Snowflake**, and **Databricks**, with **GitHub Actions** for CI/CD, transforming raw transactional data into structured analytics models to enable actionable insights for clients.
- Implemented robust data transformation workflows to clean, join, and aggregate datasets across multiple cloud platforms, improving reporting efficiency, data accessibility, and scalability.
- Developed and executed automated data tests and documentation practices to ensure data integrity, reliability, and model transparency.
- **Key Achievements:**
  - \* Successfully transformed and modeled over 1 million rows of transactional data across multiple platforms, improving reporting efficiency and data accessibility.
  - \* Reduced manual data processing time by 40% through automation and streamlined multi-cloud workflows.
  - \* Enhanced data quality and reliability by implementing comprehensive testing, validation, and documentation procedures.

### Data Consultant

Dec 2024 – Feb 2025

*Centauri Alpha*

*Remote*

- Designed and implemented custom analytics solutions using **BigQuery**, **dbt**, **Power BI**, and **Python** to help small businesses optimize decision-making.
- Developed predictive models and interactive dashboards, leveraging **dbt** for data transformations and **BigQuery** for scalable data warehousing.
- Automated **ETL/ELT workflows**, improving data processing speed, data quality, and reproducibility.
- Collaborated with marketing and finance teams to define **KPIs** and deliver dashboards that supported strategic business growth.
- Analyzed complex, multi-dimensional datasets to generate actionable insights for client acquisition and retention strategies.
- **Key Achievements:**
  - \* Optimized KPI dashboards, leading to a 20% **improvement** in business goal alignment.
  - \* Enhanced customer acquisition strategies, resulting in a 25% **increase** in client growth.

Research Assistant - Data Analyst

The University of Queensland

Jun 2024 – Oct 2024

Brisbane

- Collected, cleaned, and analyzed **infectious disease** data from diverse sources to provide actionable insights.
- Identified trends, patterns, and correlations in large, multi-dimensional datasets, driving **data-driven** decision-making.
- Created impactful **reports** and **presentations**, clearly communicating key findings and recommendations to **stakeholders**.
- Collaborated closely with stakeholders to define business needs and provide **analytical support** for strategic and operational initiatives.
- **Key Achievements:**
  - \* Utilized **simulation models** to reduce the spread of infectious diseases across travel networks in Pacific Island countries, leading to improved **epidemic control strategies**.
  - \* Presented research findings at the *7th Southern Cross Australasian Travel and Tropical Medicine Conference*, contributing valuable insights to the field of infectious disease control in Pacific Island nations.

PROJECTS

Sales Data Copilot: Lakehouse Pipeline with GenAI | Team Leader

Link

- Developed an end-to-end **AI-powered Lakehouse platform** (“Sales Copilot”), enabling **retail analytics from ingestion to insight**—integrating data ingestion pipelines, smart data modeling, and Copilot-driven insights.
- Engineered data workflows using Python with scalable lakehouse design, supporting structured/unstructured datasets—for intelligent KPI generation and automated sales reporting.
- Implemented Copilot features for **retail decision support**, enabling semantic querying and on-demand insight generation for sales teams.
- Leveraged technologies such as **Lakehouse architecture**, **AI Copilot**, and **smart analytics**, demonstrating full-stack data engineering and AI integration.

Energy Storage Value Optimization in PV Systems | Team Leader

Link

- Developed an interactive **Power BI** dashboard to evaluate photovoltaic system performance, electricity market trends, and battery storage ROI across multiple regions.
- Processed and integrated **hourly solar generation data** from Australia, Brazil, India, and Norway (2024), covering DC/AC output, irradiance, module/ambient temperature, and energy yields.
- Enriched analysis with **electricity price, demand, and supply data** via the OpenNEM REST API for Australia, enabling real-world revenue estimation and market feasibility studies.
- Calculated key KPIs including inverter efficiency, cumulative yields, system performance ratio, and estimated annual revenue of **AUD 7.97K** with a payback period of 4 years.
- Applied time-series analysis to identify performance patterns, temperature-efficiency correlations, and optimal battery dispatch strategies for increased profitability.

PUBLICATION

Travel network analysis for infectious disease transmission in Pacific Island countries

7th Southern Cross Australasian Travel and Tropical Medicine Conference(Pg.10)

Link

Sep 2024

CERTIFICATION

Databricks Fundamentals

DataBricks

Credential

Mar - 2025

dbt Fundamentals

Linkedin

Credential

Feb - 2025

Atlassian Agile Project Management Professional Certificate

Atlassian

Credential

Mar - 2025

EDUCATION

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Master of Data Science

*The University of Queensland*

*2022 - 2024*

Completed data-driven research on travel networks & infectious diseases.

REFERENCE

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Reference as request