CODY HOU

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SUMMARY

- **Data Analyst** with a proven track record of delivering **data-driven business solutions** across energy, finance, and public health sectors, achieving cost reductions of up to **AUD 1M annually** through optimized reporting and predictive modeling.
- Expert in **SQL, Python, Power BI, Tableau, and Databricks**, with hands-on experience in **dbt, Snowflake, and BigQuery** for scalable ETL pipelines, data modeling, and cloud-based analytics.
- Skilled in **KPI design, operational performance analysis, and financial forecasting**, enabling executive teams to make informed strategic decisions.
- Adept at integrating data from **APIs, ERP systems, and IoT devices**, ensuring **data integrity, compliance, and audit readiness** in both corporate and government settings.
- Passionate about applying **predictive analytics, automation, and advanced visualization** to uncover actionable insights, improve operational efficiency, and drive measurable business outcomes.

SKILLS

Programming & Scripting: Python, SQL, R.
Data Processing & Analytics: Pandas, NumPy, SciPy, Matplotlib, Seaborn, ggplot2 (R).
Databases & NoSQL: MySQL, PostgreSQL, SQL Server, MongoDB.
Data Warehousing: BigQuery (GCP), Redshift (AWS), Snowflake, Databricks.
Data Transformation: dbt (Data Build Tool), Power Query.
Business Intelligence: Power BI, Tableau, Excel (Pivot Tables, VBA).

WORK EXPERIENCE

Data Analyst   **Jun 2025 – Present**
Redx Technologies Australia   *Full-Time*

- Extracted and integrated data from internal databases, RESTful APIs, and GraphQL endpoints to deliver dynamic dashboards and KPIs with Power BI/Tableau.
- Designed a Python-based simulation model for PV + battery systems to analyze real-world energy storage performance and market feasibility.
- Provided data-driven proposals and insights to customers on cost savings and ROI, while automating reporting workflows and ensuring compliance across systems.
- **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.

Data Analyst   **Mar 2025 – Present**
Upwork   *Remote*

- Designed and delivered custom reports and dashboards using Power BI to assist clients in decision-making.
- Assisted clients in data cleaning, ETL processes, and data reporting automation to streamline workflows.
- Helped clients set up KPIs and created basic predictive models to forecast trends and improve business strategies.
- **Key Achievements**:
  * Delivered high-quality reports and dashboards on-time to help clients visualize their data and gain insights.
  * Received positive feedback and built trust with initial clients, leading to repeat business opportunities.

Data Consultant   **Dec 2024 – Feb 2025**
Centauri Alpha   *Remote*

- Designed and implemented custom analytics solutions using **Power BI** and **Python** to help small businesses optimize decision-making.
- Developed predictive models and data visualization dashboards to enhance **data-driven strategies**.
- Automated **ETL workflows** to improve data processing speed and accuracy.
- Collaborated with marketing and finance teams to define **key performance indicators** (KPIs) and create dashboards that support business growth.
- Analyzed **multi-dimensional datasets** to generate actionable insights for client growth 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   Jun 2024 – Oct 2024
The University of Queensland   *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   **Link**
7th Southern Cross Australasian Travel and Tropical Medicine Conference(Pg.10)   *Sep 2024*

CERTIFICATION

Databricks Fundamentals   **Credential**
DataBricks   *Mar - 2025*

dbt Fundamentals   **Credential**
Linkedin   *Feb - 2025*

Atlassian Agile Project Management Professional Certificate   **Credential**
Atlassian   *Mar - 2025*

EDUCATION

Master of Data Science
The University of Queensland   *2022 - 2024*
Completed data-driven research on travel networks & infectious diseases.

REFERENCE

Reference as request