

JOHN WEI

Data Engineer | Analytics Engineer | ETL Pipelines, Cloud Migration & Data Modelling

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SUMMARY

Data Engineer with 3 years of experience building and maintaining ETL pipelines, transformation layers, and data models that turn raw, multi-source data into reliable, analytics-ready systems. Hands-on experience validating data quality and integrity across a large-scale cloud migration (AWS to GCP), using SQL, Python, Dataform, and Airflow to ensure trustworthy, well-governed data at scale. Skilled in designing self-serve pipelines and dashboards that let business users answer their own questions, partnering closely with Engineering, Product, and business stakeholders to translate ambiguous data problems into scalable, production-ready solutions.

EDUCATION

Bachelor of Data Science and Decisions - Major in Business Data Science

Feb 2019 - Aug 2023

University of New South Wales (UNSW), Sydney, Australia (*Distinction WAM or Dutch equivalent of 8.0 or higher*)

WORK EXPERIENCE

MACQUARIE GROUP

Sydney, Australia

A leading global financial services group headquartered in Sydney, Australia, and one of the world's largest infrastructure investors, operating across more than 30 markets worldwide.

Analytics Engineer

Mar 2026 - Jun 2026

- Architected an end-to-end data analytics pipeline for Home Loan Automation, designing the data model and transformation layer to power operational and executive-facing ThoughtSpot dashboards from a single source of truth.
- Built with a self-serve philosophy, documenting data definitions and enabling business users to answer their own questions from the pipeline's output rather than relying on ad hoc requests.
- Developed an AI-assisted initiative leveraging Claude Skills to analyse behavioural patterns in flagged home loan applications, review and validate AI-generated Python analysis to surface fraud-risk insights to operations teams.

Data Engineer

Mar 2025 - Feb 2026

- Supported a large-scale ETL migration from AWS S3 to Google Cloud Platform, using SQL and Python alongside Dataform, Airflow, Bamboo, and Control-M, progressing migration completion from 65% to 83%.
- Owned data quality checks and testing across the migration, verifying schema and table consistency, reconciling 10+ years of historical data, and resolving discrepancies before production go-live.
- Collaborated with senior engineers to troubleshoot Dataform transformation logic and Airflow orchestration issues, ensuring migrated pipelines produced consistent, trustworthy, well-governed output.

Data Analyst

Feb 2024 - Feb 2025

- Designed and delivered an ETL pipeline using SQL, Alteryx, and ThoughtSpot, transforming broker application data into actionable insights, increasing trigger action rate from 30% to 80%.
- Applied frequentist and Bayesian A/B testing methodologies in Python to evaluate the causal impact of trigger-based interventions on home loan application volume.
- Produced a discount analysis dashboard in ThoughtSpot, segmenting customers by risk and loan characteristics, identifying unnecessary discounting and reducing average discount given by 40%.

Data Analytics Intern

Dec 2022 - Feb 2023

- Contributed to an automated broker alert pipeline using SQL and Python for data cleaning and transformation, building one of three initial trigger metrics used to flag brokers requiring BDM follow-up.
- Developed an ETL pipeline in Alteryx, using SQL to extract, transform, and integrate customer and product data into Macquarie's datamart, documenting data definitions and building a dataset of 1.6M+ customers across 400 metrics.
- Built a dashboard visualising a machine-learning-predicted interest rate model to support home loan discount decision-making.

AMERICAN EXPRESS

Sydney, Australia

A leading global financial services company headquartered in New York, USA, providing payment, credit, travel, and financial services to consumers and businesses across more than 170 countries and territories.

Data Analytics Intern

Feb 2023 - Jul 2023

- Cleaned, validated, and merged decentralised B2B customer transaction datasets across multiple clients to resolve data quality issues, using Advanced Excel and Pivot Tables to deliver standardised executive summaries.
- Led a technical feasibility assessment for migrating legacy Excel reporting to Tableau, mapping business metrics and analysing technical gaps across cross-departmental teams.

EXTRACURRICULAR ACTIVITIES

Startmate

Sydney, Australia

Startmate accelerates ambitious founders and operators, backed by leading angels, venture funds, and tech startups across ANZ.

Student Fellow, Winter '23 Cohort

Feb 2021 - Feb 2022

- Selected as a Student Fellow for Startmate's pre-accelerator program, a highly competitive, mentor-driven initiative backed by leading ANZ angels, venture funds, and tech startups.
- Developed and pitched a non-technical startup concept within a one-month sprint, applying structured problem-solving under significant ambiguity and time constraints.

Textbook Ventures

Sydney, Australia

Textbook Ventures is a student-led, not-for-profit organisation supporting aspiring and existing student entrepreneurs across Sydney universities, backed by leading Australian VC firms.

Events Director

Mar 2023 - Nov 2023

- As an Events Director, I led events for a cross-university, VC-backed student entrepreneurship organisation, supporting a community of aspiring founders across Sydney, Australia.

AIESEC

Sydney, Australia

Global youth-led organization operating in 100+ countries and territories, focused on leadership development, cross-cultural exchange, and youth engagement.

Local Managing Director

Feb 2021 - Feb 2022

- Led a local chapter delivering 40+ leadership and professional development initiatives for 250+ students, achieving 65% year-on-year revenue growth.
- Coached a 6-person executive team and led product strategy across 4 service lines, securing 3 national awards in Business Development, Talent Management, and National Contribution.

People & Talent Lead

Feb 2020 - Jan 2021

- Designed and automated business performance dashboards (Google Sheets Query Language), replacing a fragile, error-prone formula system to support evidence-based decisions for a 40+ member team.

PROJECTS & AWARDS

Community Event Planning Web App

Feb 2026

- Vibe coded a full-stack web app using Cursor, Claude, and Vercel to help friends coordinate event scheduling, planning, and hosting, solving for fragmented coordination across group chats, calendars, and shared docs.

Canva x Prodigy Productathon - Won 2nd Place

Apr 2022

- Built a draft-mode prototype with a 3-person team to help users visualise their Instagram feed, using Figma and Miro.

SKILLS & LANGUAGES

- **Programming & Languages:** SQL, Python
- **ETL & Pipeline Tools:** Alteryx, Dataform, Airflow, dbt
- **Data Warehousing & Modelling:** BigQuery, Snowflake, Data Modelling
- **Cloud Platforms:** AWS, Google Cloud Platform, Cloud Storage (GCS)
- **Data Visualization & BI:** ThoughtSpot, Tableau, Power BI, Looker, Excel
- **Development Tools:** Git, Jupyter Notebook, Postman
- **Project & Documentation Tools:** Jira, Confluence
- **Statistical & Analytical Methodologies:** A/B Testing (Frequentist & Bayesian), Regression Analysis
- **Languages:** English (*Native*), Mandarin (*Native*), German (*A1*)