

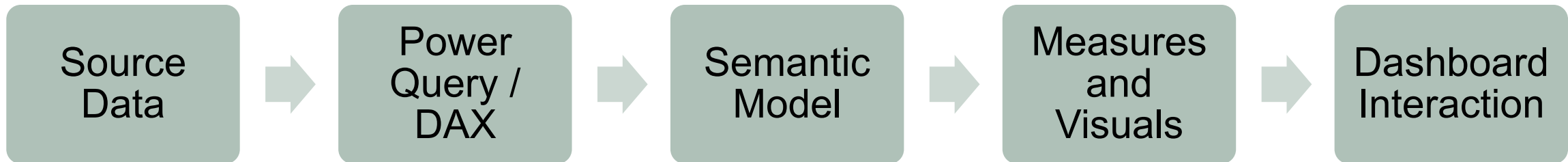
Project Overview

This project developed an interactive Power BI Alumni Analytics Dashboard for UTAS. The platform brings together alumni, graduation and engagement data to visualise key trends in demographics, geography, study areas, course completions, contactability and data quality. The dashboard supports strategic planning and reporting by turning complex alumni records into clear, actionable insights.

Objectives

- Build a scalable Power BI dashboard for alumni analytics.
- Clean, transform and model alumni data from multiple sources.
- Visualise key trends across demographics, locations, study areas and completions.
- Support strategic planning, reporting and engagement decisions.
- Identify data quality and enrichment opportunities.
- Explore predictive insights and forecasting features.

Data & Workflow



Dashboard Features

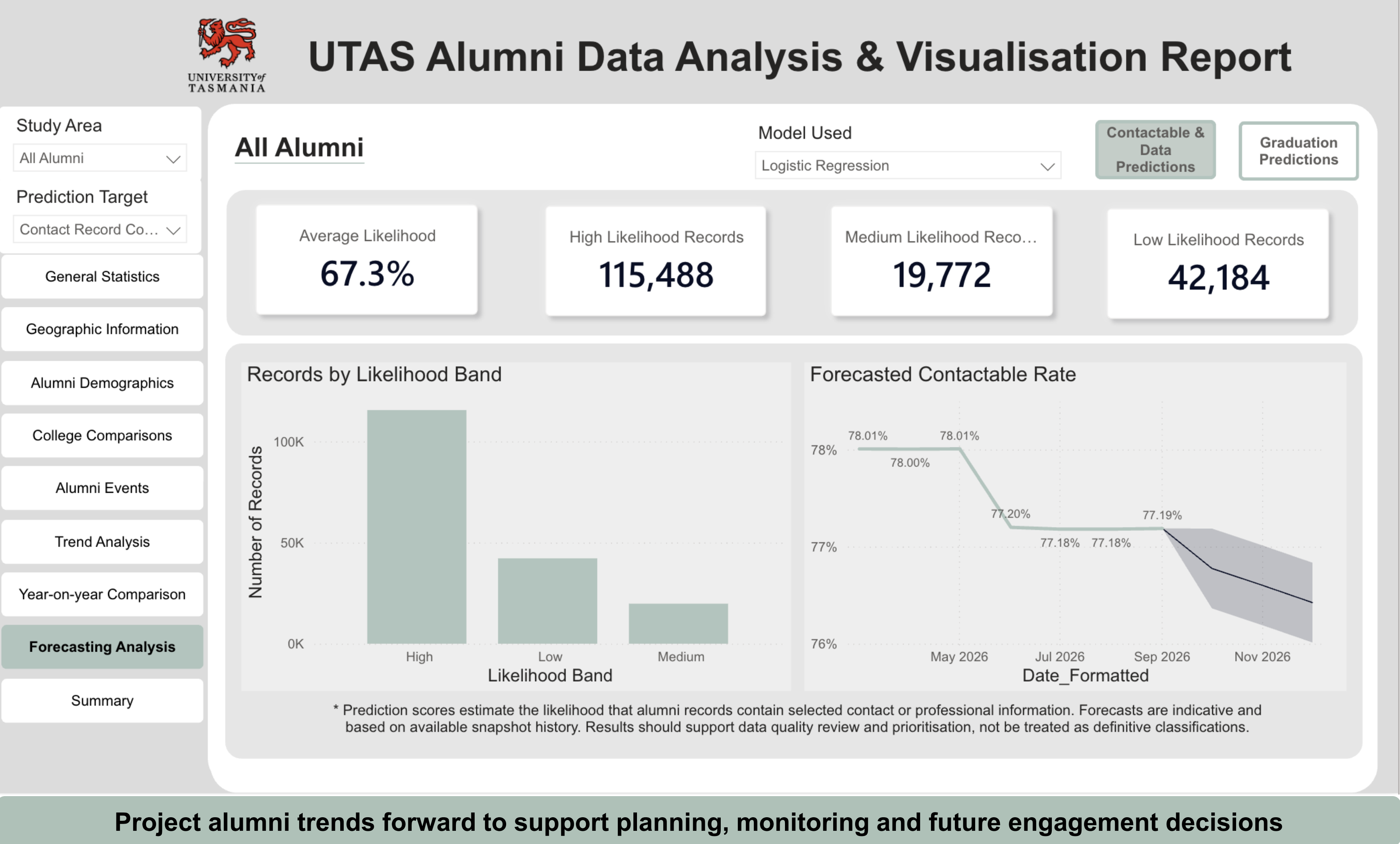
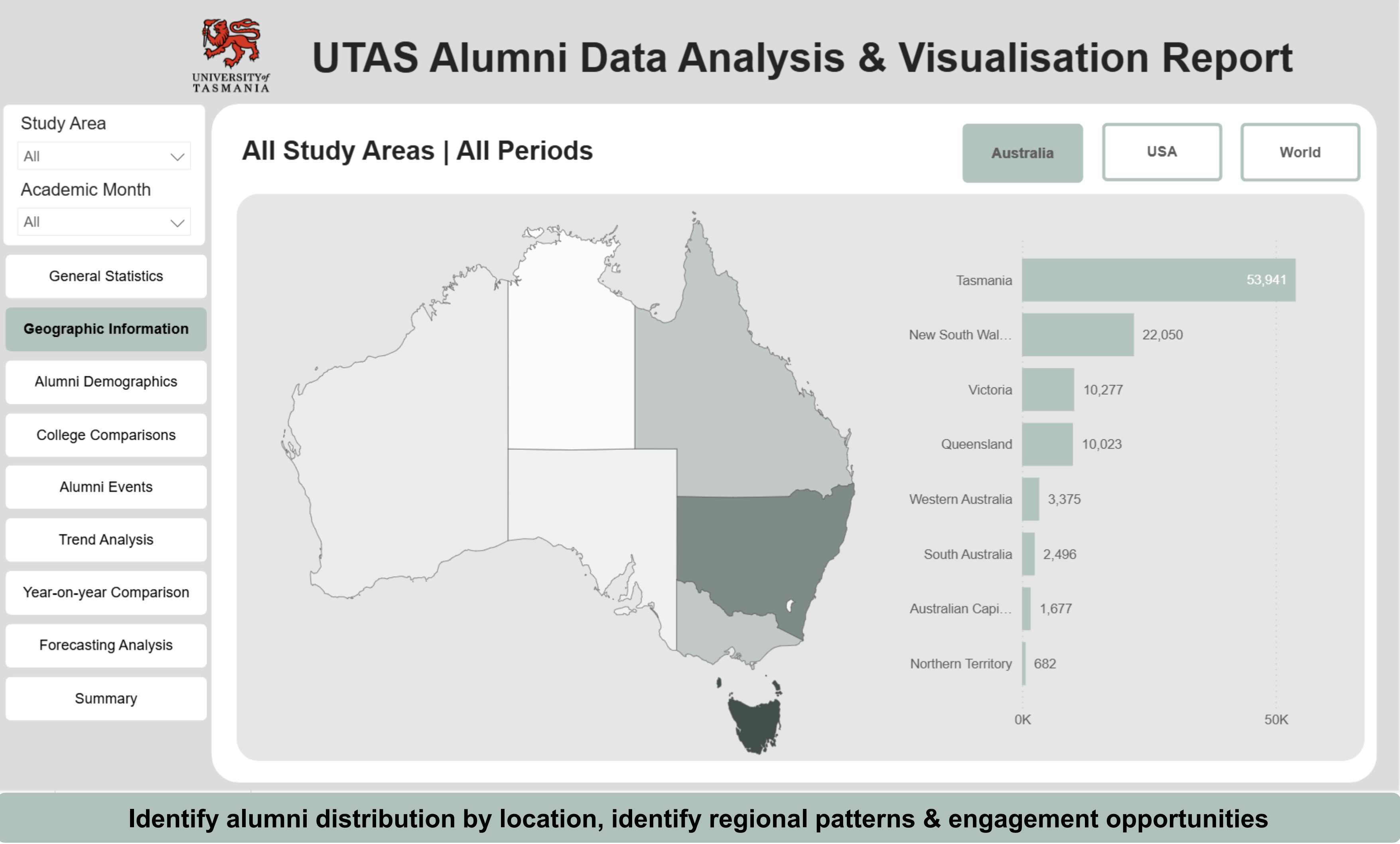
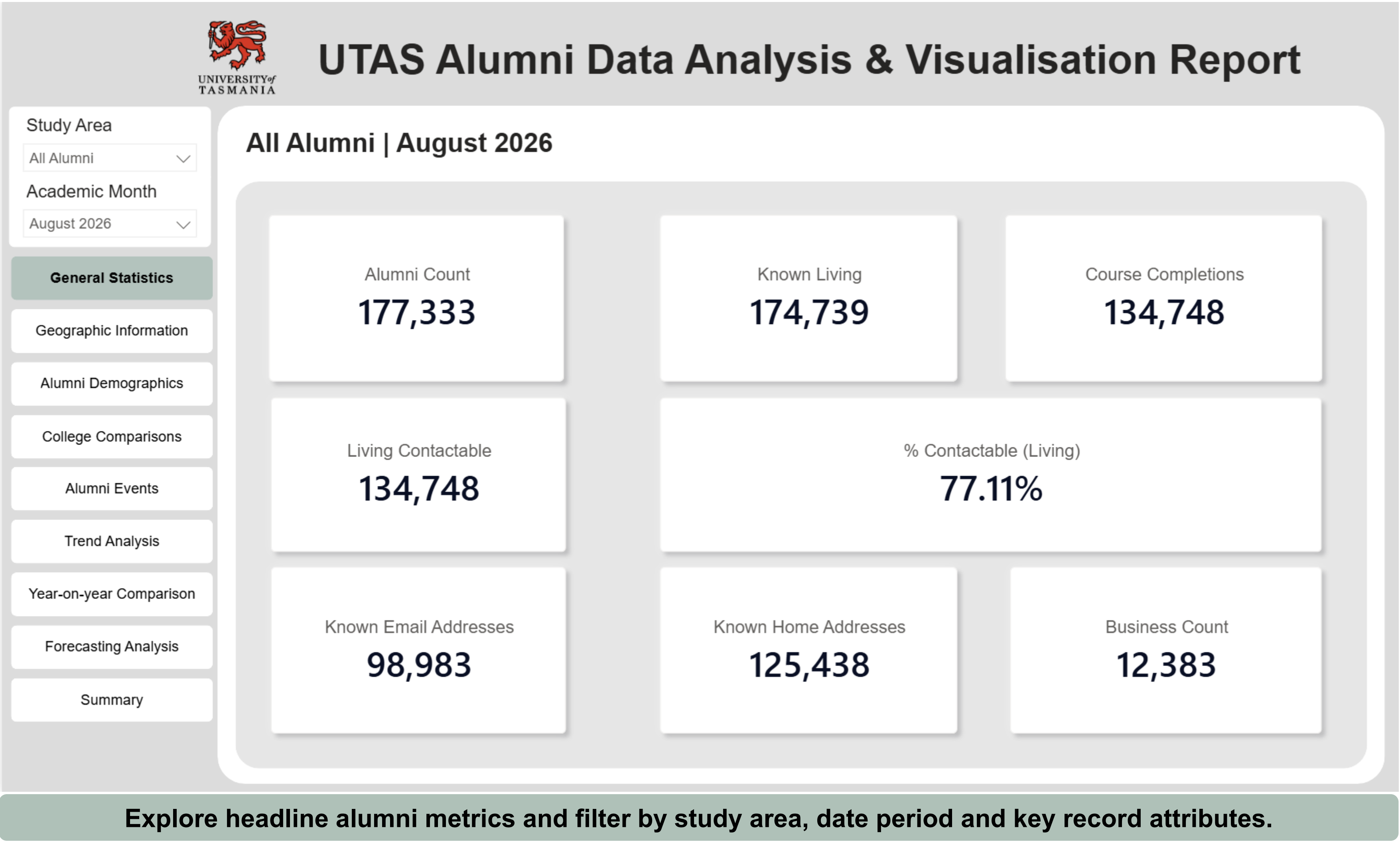
- Interactive filtering by study area, date period and alumni attributes.
- Summary pages for alumni demographics, geography and course completions.
- Trend and year-on-year views to compare changes over time.
- Admin review tools to identify unmapped or invalid data values.
- Dedicated pages for machine learning predictive insights and forecasting analysis.

Technologies Used

Technology	Description
Power BI	Dashboard development and interactive reporting.
Power Query	Data cleaning and transformation.
DAX	Calculated tables, measures and evaluation.
Python	Predictive model training and evaluation.
Jupyter Notebook	Model development environment.
Nectar Research Cloud	Approved cloud environment for modelling.
Excel / CSV	Source data, mapping tables, training/scoring data and prediction outputs.
Teams / SharePoint	External file storage and collaboration environment.

Limitations & Future Work

- Manual mapping tables require ongoing maintenance to ensure accurate categories, slicers, KPIs and security.
- Predictive insights are indicative only, with outputs affected by missing data, class imbalance and manual CSV refresh steps.
- Future work could automate mapping governance, predictive model refreshes, security auditing and data pipelines.
- Further enhancements could include donor analytics, engagement scoring, event attendance prediction and improved longitudinal forecasting.



Key Outcomes

- Built an interactive Power BI platform for complex alumni data.
- Enabled analysis of demographics, locations, study areas, completions, events and trends.
- Improved governance through mapping tables, admin review tools and row-level security.
- Added machine learning predictive outputs for contact readiness and data quality prioritisation.
- Designed a maintainable solution for future graduation-cycle refreshes and expansion.