Advanced SQL Analytics for UK Insurance: Predictive Risk Profiling & Profitability Optimization

Transforming UK insurance operations through data-driven decision making

What if you could predict which insurance customers are **3x more likely to file a claim** before they even do?

Current Challenges in UK Insurance Analytics

Inaccurate Risk Pricing

Reliance on incomplete data analysis leads to mispriced policies and revenue leakage

Reactive Claims Management

Responding to claims after they occur rather than predicting and preventing losses

Fragmented Customer Data

Critical insights lost across disconnected systems and departments

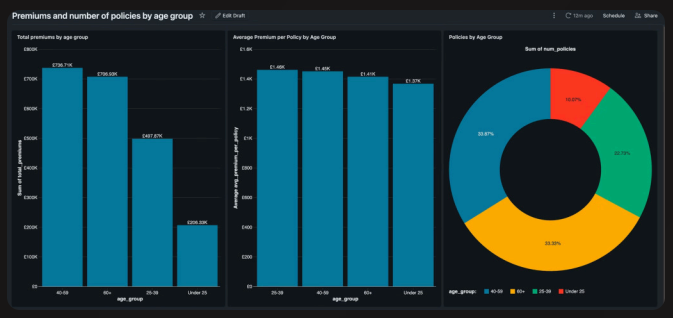
Manual Reporting Processes

Slow, labour-intensive analytics delaying critical business decisions

UK insurers lose **millions annually** due to these inefficiencies in data utilisation and risk assessment.

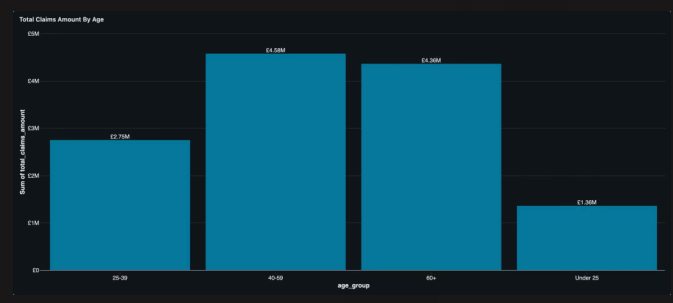
Age-Based Profitability & Risk Analysis

Premium & Policy Distribution by Age



Premium revenue is highest among 26-40 age group, with 41-60 having second-highest policy count.

Claims Amount by Age Group



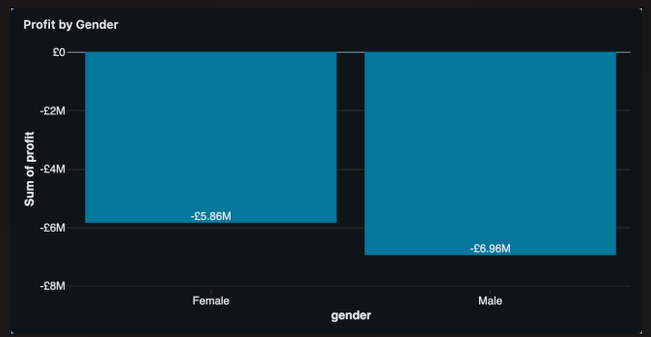
The 26-40 age group generates the highest claim amounts, creating a significant profitability challenge.

Profit Analysis by Age Group

Our analysis reveals that **most age segments are unprofitable**, with only the 61+ demographic delivering positive returns.

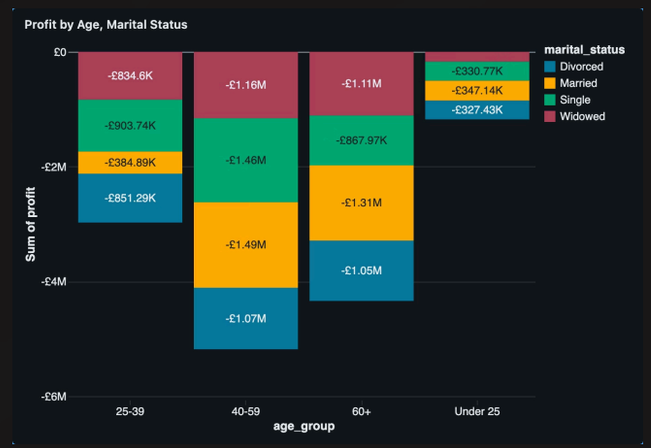
Demographic Segmentation & Claim Likelihood

Gender Analysis



Males show significantly higher losses than females, suggesting current pricing models inadequately address gender-specific risk factors.

Marital Status Impact



Married customers aged 41-60 show better profitability than single counterparts in the same age bracket.

Occupation Profitability

Certain occupations show consistently higher losses, indicating potential for occupation-specific risk adjustments.

Data Collection

1,200+ customers, 1,500+ policies, 1,000+ claims analysed

SQL Analysis

Advanced queries for segmentation and pattern identification

Risk Profiling

Predictive models identifying high-risk customer segments

Predictive Claims Modelling & Business Impact

Claim Likelihood Prediction by Segment

Our SQL analytics framework successfully identifies customer segments with up to **300% higher claim probability**, enabling proactive risk management.

Business Value Delivered

Reduced claim costs through improved risk assessment and proactive interventions

Enhanced customer retention via targeted, risk-appropriate pricing strategies

Accelerated decision-making with automated SQL reporting dashboards

Next Steps for UK Insurers

Implement segment-specific pricing strategies, develop targeted risk mitigation programmes for high-risk segments, and establish continuous monitoring systems to maintain predictive accuracy.