Declan Walpole

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Technical Skills

- SQL (highly proficient)
- R (highly proficient)
- Excel (highly proficient)
- Power BI (proficient)
- Javascript (familiar)
- Tableau (familiar)

Work Experience

Director of Commercial Strategy
→ Snr Director of Commercial Intelligence
→ VP of Corporate Insights **(April 2020-Present)**
PointsBet (Denver CO)
Developed a thorough understanding of the US online sportsbook business model – from marketing to LTV to COGs. Reported on and scrutinised the business performance, as well as being instrumental to forming PointsBet's 1 year and 10 year outlooks.

Key contributions and projects:

- **Conducted "Strategic Review" alongside ex-consultant Board member:** Compiled powerpoint deck overviewing market dynamics, revenue opportunity and trends, and synthesized information from stakeholder interviews of senior-most employees. Presented verbally at Board Strategy Day (Feb 2022).
- **Business forecasts and 10 year plans:** Custodian of the US Trading Models that contained detailed monthly forecasts of sportsbook, iGaming and retail verticals by state. Owned the assumptions regarding conversion, CPAs, churn, betcounts, staking, margin and promotions, with close input from varied stakeholders. Provided feedback to Exec as to the areas of the business model that required strategic rethinks. Understood and communicated the relative investability of states to influence allocation of resources.
- **Involvement in financial modelling of business development opportunities:** I was the key analyst assessing many of PointsBet's prospective pro team/league partnerships, media/marketing partnerships, M&A opportunities and state market access deals.
- **Ongoing business performance updates and analytics:** Compiled and shared regular updates regarding the business performance relative to forecast. Responsible for regular marketing updates as well, with particular focus on ROI.
- **Contributor to quarterly investor presentations to stock market (ASX)**

Director of Quantitative Analytics **(Oct 2019- Mar 2020)**
PointsBet (Denver CO)
Having transferred to the US, my focus was on developing analytics and metrics for the CRM, marketing and trading teams. I was supported by 1 analyst. Specifically, we had an interest in understanding client value and identifying valuable behaviours, as we were cognisant that AU experience would not apply to the nascent US market.

Key contributions and projects:

- **Customer Lifetime Value:** Statistical model for a clients' forward-looking 12m gross win based on betcounts, staking, bet types and price-taking attributes. Implemented in the Data Warehouse to refresh daily. Used by CRM team in segmentation and profiling.
- **Client Milestone Score:** Devised a numerical score (0-10) for Marketing team to quickly assess (within 7, 30, 90 days) the relative quality of newly acquired clients, so as to inform optimisation of tactics and offers.
- **Predictive Churn Model:** Logistic regression model was trained and deployed to estimate the likelihood of a client going 14 or 28 days without placing a bet, based on a variety of features.
- **Expected Value (EV) based on closing prices:** Designed and implemented a solution on the Data Warehouse that captured the closing price of events, compared to the prices that clients took and returned theoretical gross win on every bet (limited markets).

Head of Quantitative Analytics **(Apr 2018-Sep 2019)**
PointsBet (Melbourne, Australia)
PointsBet sought me out to run the Quants team, reporting to the COO. The team was responsible for all derivative pricing of fixed odds and pointsbetting markets. Traders interacted with Quants scripts (written in R) to generate csv files for uploading to our core betting platform (TBS).

Key contributions and projects:

- **Managed small team of analysts:** Supervised and coached 3.5 FTEs. I was the gatekeeper for the code base as well; approving all pull requests.
- **Overhauled and architected derivative pricing solution:** The process surrounding the derivative pricing scripts had evolved naturally as the startup grew. When I came in, I applied a more rigorous structured approach that would ensure the solution could scale.
- **Modelling and pricing of all major AU and US sports:** I was hands-on in the data collection, statistical modelling and implementation of R pricing solutions.
- **Cash Out and Odds Boost products:** I devised the algorithms that underpin the PointsBet cashout, odds boost and parlay odds boost products to ensure the desired level of incremental margin impact.

Head of Quantitative Analytics **(Jul 2017 – Mar 2018)**
William Hill (Sydney, Australia)
The Quantitative Analytics team supports the pricing, decision making and efficiency of the Trading and Risk units through detailed analysis of trends and modelling of markets.

Key contributions and projects:

- **Managed small team of analysts:** Supervised 2.5 FTEs and managed the workflow of requests from several key Sports and Racing stakeholders.
- **Responsible for P&L of trading initiatives and products:** Developed the algorithm and optimized business parameters of Price Pump and Multi Price Pump, and conducted revenue assessments of countless other prospective initiatives.
- **Real-Time Alerting:** Implemented and refined intraday alerting to assist traders in identifying risks covering market liability, uncharacteristic client behavior and mispricing.

Quantitative Trading Analyst **(Mar 2016-Jun 2017)**
William Hill (Sydney, Australia)

Key contributions and projects:

- **Modelling and Pricing of Sports:** Applied statistical techniques and simulations to model probability distributions of scores using historical match results and odds. The calculated probabilities are used to automatically derive hundreds of markets given handicap and total. Sports included AFL, basketball, NRL, NFL and racing exotics.
- **Optimising Margin:** Analysed competitive trading strategies and validated pricing decisions to ensure net revenue was maximized.
- **On-going Reporting:** Developed, updated and interpreted reporting of trading performance, and communicating findings to the Executive.

Analyst - Customer Insights and Modelling **(Jul 2015-Feb 2016)**
Commonwealth Bank Of Australia (Sydney, Australia)

The Customer Insights and Modelling team acts as internal consultants for RBS Strategy, utilizing probability models, decision trees and segmentation to predict customer behavior regarding attrition, product uptake, channel usage and spending patterns.

Key contributions and projects:

- **Life Events:** Devised and built predictive models for whether a customer has recently married, had a child etc. Techniques applied include decision trees, random forests and logistic regression.
- **Customer Lifetime Value:** Devised and built a panel data regression model to predict the present value of the customer's future revenue for the bank. The drivers of value we identified were product holdings and demographic information.
- **Forecasting high-quality customers in 2020:** Formulated a markov chain to describe the movement of customers through the bank's value matrix. Provided the Strategy team with insightful forecasts of how many quality customers there will be in the year 2020.

Analyst - Deposits and Transactions Analytics **(Apr 2014-Jun 2015)**
Commonwealth Bank of Australia (Sydney, Australia)
The Deposits and Transactions Analytics team are invaluable partners to the product managers of CBA's everyday banking accounts, providing insights and on-demand analytical support.

Key contributions and projects:

- **Various product deep dives:** Worked closely with stakeholders to provide relevant and timely information relating to savings and transactions products. Identified trends and opportunities in the portfolio from vast amounts of data, presenting them back via high fidelity visualizations and easy to interpret powerpoint packs.

Research Assistant (Part time) **(Nov 2013-Feb 2014)**
University of Sydney (Sydney, Australia)
Assisted a senior lecturer within the discipline of Business Analytics conduct academic research and proof-read journal articles relating to econometrics and time-series forecasting.

Key contributions and projects:

- **Optimal Forecast Combination:** Examined the optimal way of combining expert earnings per share forecasts of SP500 companies.

Academic Achievements

Bachelor of Commerce (Honours) - Econometrics
(2010-2013) University of Sydney

- University Medal
- First Class Honours
- Publication: Journal of Quantitative Finance, “Bayesian Semi-parametric Tail Risk Forecasts Incorporating Realized Measures of Volatility” (Gerlach, Chen & Walpole 2017)