

N A W E N (N O V E N) G O N G

(858) 344-2821 | Gong.Nawen@gmail.com | www.linkedin.com/in/noven-gong-analytics

E X P E R I E N C E

Risk Analyst, Forwardline Financial, Los Angeles, CA, US

09/2019 – Now

- **Credit Policy:** Wrote complex queries to analyze and benchmark loan performance KPIs to control default balance and delinquency. Measured new credit policies under worst/best case scenario with ROI, LTV and deterred charge offs to support data-driven decisions. Simulated credit decision modules to assure targeted preliminary rate under risk strategy upgrades.
- **Analytics:** Identified drivers and solutions to claims made by business partners with root cause analysis and action plans. Designed experiments to test business hypotheses to optimize customer lifetime value and fraud tactics. Developed metrics to accurately reflect delinquency and built forecasting model to predict default balance for tactic planning.
- **Reporting:** Retrieved, curated, and integrated multiple datasets for cross-functional projects, loan performance reporting, and ad-hoc analysis. Owned the schema for dashboards creation and metrics calculation. Understood pain points and logics of finance reconciliations and developed SQL/Python scripts to automate the manual process.
- **Automation:** Teamed up with Tech&DevOps to build data pipeline for Analytics platform, enhancing reporting timeliness and reducing costs; productionized Python scripts to automate the recurring reports creation; created endpoints to automate and invoke ML models on AWS.

Financial Analyst, Genentech, South San Francisco, CA, US

07/2016 - 06/2017

- Developed dashboards and spreadsheets to track finance KPIs and support forecasts. Prepared ad-hoc reports and provided financial updates and variance analysis to enhance transparency into financial drivers.
- Supported month-end closing; Updated and consolidated accruals to reflect services rendered by vendor.

Personal Banking Associate, Bank of China, Xi'an, Shaanxi, China

08/2012 - 02/2014

- Evaluated client financial position and managed clients' combined investment of over 400 million RMB.
- Directed visualizations for portfolio performance to deliver automated reports for each client.

S P E C I A L I Z E D S K I L L S

- **Programing:** Python, MySQL, MS SQL Server, R, SAS
- **Tools:** Snowflake, Git, Jupyter, Tableau, Quicksight (AWS), Microsoft Office, Jira, AWS, Azure Data Studio, Salesforce, SAP

W O R K P R O J E C T S

09/2019 - Now

- **Revamped Unreported Lien Detection Process (pandas, numpy, urllib, json, rtree, S3):** Replaced manual Lexis Nexus search for liens with automatic report parsing and decision model. This new process doubled the hidden active lien (UCC) detection recall rate and reduced underwriter labor, speeding up fraud review process while reinforcing the protection of lenders' financial interests with the new UCC detection model. The model was developed by mining active liens from past raw bureau reports (XML) to find the true active lien patterns and tested the correlation of unreported lien amount and age with loan performance data.
- **Suspicious Bank Account Detection (SQL, pandas, numpy):** Developed an automated report with 12 flags/indicators as a guideline for fraud specialists in determining suspicious bank accounts and fraudsters which was previously an individual judgement. It was built by merging merchant bank transaction with application data, then applying SQL aggregations to create fields such as ratio of gross deposits to reported sales (detecting fake or inflated application information); weekly deposits multiplier (suggesting potentially inactive account); and percentage of unusual geo activities (indicating possible fraudsters).
- **Funnel Conversion Analysis and Loss Sizing (SQL, AWS Quicksight, seaborn, matplotlib, Excel, wordcloud):** Monitored daily/weekly funnel conversion rate and processing speed at each stage by building an interactive dashboard. Benchmarked with forecast and history metrics; measured conversion losses attributed to specific credit policies and underwriter review processes to evaluate for possible improvements.
- **Portfolio Delinquency Forecasting Model and Automation (SQL&Python scripting, multiprocessing, Excel, Sagemaker):** Built and automated a Roll Rate forecasting model to predict 6-month 90+ delinquent balance to support dynamic credit policy upgrades. The forecasting error was half of the previous model. The source table was built by joining multiple tables and creating various calculated fields using aggregation and window functions in SQL. The key predictor is days past due (DPD) computed in Python that cuts principle balances into 5 DPD buckets. It allows us to deduce M-O-M average bucket to bucket roll-rates to be used as the likelihood of bucket movements, ultimately forecasting expected delinquent balances.

EDUCATION

- Master of Science in Business Analytics**, Rady School of Management, UC San Diego, CA, US 06/2019
- Customer Analytics (A+) / Fraud Analytics (A) / Big Data Tech and Business Application (A)
- Certificate in Accounting**, UC Santa Cruz, Extension, Silicon Valley, Santa Clara, CA, US 01/2016
- AICPA: AUD/94, FAR/87, REG/90
- Bachelor of Arts in Accounting**, Xi'an International Studies University, Xi'an, Shaanxi, China 06/2012
- ACCA: Winner of ACCA Global Test F7 (Financial Reporting) in North-West District

ACADEMIC PROJECTS

08/2018 - 06/2019

Developing and Targeting the 'Right' Customers:

- **Intuit-Upgrade Customer Acquisition (Regression, RFM, NNet, XGBoost)**: Developed an automated machine using past transactional and user profile datasets to target the "right" customers for a new product marketing campaign, leading to 3.7X growth in customer purchase and 3X increase in ROI compared to random.
- **Groupon Mobile App Push Messaging (RFM, Naive Bayes, Regression)**: Increased response rate by 72% towards the App push message by analyzing the past campaign datasets to build a set of predictive models that auto selected the best customers to receive the push messages. ROME was tripled compare to baseline model.

Retaining Customers and Selecting the 'Right' Offers:

- **Pentathlon Digital Campaign for Cross-selling (Random Forest, Keras, LTV)**: Optimized promo email frequency with predictive models and LTV analysis to cut subscription churn by 66.7%; customized ad content and designed cross-selling & upselling strategy with robust Neural Network model, driving annual profit up by more than 20%.
- **Capital One Data Driven Credit Card Design (Full/partial-factorial design, Regression, LTV)**: Maximized the credit card open rate by designing 18 test offers for 3 customer segments; picked the best offer for each type of customer based on the experiment outcome and rolled out to all the potential customers, improving the overall response value by 60%.

Web Analytics, Data Mining and Visualization:

- **J Wata Temaki Bar Customer Review Analysis (BeautifulSoup, Urllib, Google Analytics)**: Built crawl bot to scrape Yelp reviews for J Wata; conducted sentiment analysis to develop customer experience insights that assisted the restaurant owner in improving customer retention and operation efficiency.
- **TripAdvisor Reviews of Aria Hotels (TF-IDF, Wordcloud, Tidytext)**: Enabled hotel managers to discover factors behind low vs. high rated hotel experiences through TF-IDF analysis. Visualized service usage patterns across seasons to provide actionable advice on operation planning; graded customer satisfaction across hotel services using sentiment score.