Fiona Liu

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ABOUT ME

**Programming:** SQL · Python · R · MATLAB · VBA · JavaScript · HTML · CSS · Flask

**Analytics:** Python · Excel · Tableau · Power BI

**Platform:** GitHub · Jupyter Notebook · Spyder · Visual Studio· Google Analytics · JIRA

**Business:** CFA I · FRM I · Porter’s Five Forces· SWOT · PEST · Agile & Waterfall Project Management

**Modelling:**  Machine Learning · Classification · Regression · Clustering · Ensemble Learning· Boosting · Deep Learning · A/B testing

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PROJECT

**Credit loan model (Udemy Data Science Project):**

* Built credit risk modeling to calculate expected losses (**EL**) for bank loan utilizing Python with the breakdown of **PD, LGD, EAD** modeling to estimate bank reserve level to meet regulation requirement
* Utilized **EDA analysis**, feature engineering, **weight of evidence, information value** to select features, understand inputs and pre-process data
* Generated a **score card** while building **PD model** for creditors through categories such as age, education, purpose of loan etc

*Tools: scikit-learn, logistic regression, random forest, light GBM, matplotlib, seaborn*

**Titanic Survival Website (**[*Link*](https://titanicsurvival-flask.onrender.com/)):

* **Built a website** that Interact with user to see whether the user would have survived Titanic disaster if the user was on board .
* Deployed **a machine learning model** into a **web server** by utilizing **Flask**, **backend** & **frontend development** techniques

*Tools: Python, random forest, scikit-learn, flask, html, CSS, JavaScript, GitHub, Render*

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EXPERIENCE

**Royal Bank of Canada** *Toronto, ON*

Associate Director, Capital Market *Sep 2022 – Oct 2023*

* Employed advanced data analytics to optimize **counterparty credit risk** processes and implemented data-driven process improvements
* Developed a ***linear regression model***with 0.74 R2 scorein Python to predict long term bond curve rate, providing valuable insights for better risk management decisions
* Initiated a ***liquidity analysis model*** that automated the workflow of data extraction and complex liquidity analysis across multiple asset class
* ***Cutting down overall processing time by 6+ hours and improved data accuracy by 60%*** via automating the USPR monitoring process using ***Python***, and resulting in more efficient identification of non-compliant ISINs
* Coordinated with cross-functional teams to define project requirements and deliver data-driven solutions aligned with business objectives

Manager, Treasury and Investor Services *Mar 2021 – Sep 2022*

Associate, Treasury and Investor Services **- *2021 RBC Annual Conference Individual Award*** *Jul 2019 – Mar 2021*

* Developed a ***K-Means machine learning model*** to perform customer segmentation personalize services using ***Python*** *and properly distribute project resources by providing recommendations based on the business strategy understanding.*
* Successfully onboarded 2 new clients with new automation, established RBC Middle Office Canada Service Team from scratch to a team of three for RBC I&TS, and optimized collateral management and trade matching using ***data science techniques***
* ***Achieved outstanding efficiency improvements and saved processing time by 90%*** via the implementation of multiple automation processes (e.g., Reconciliation, Reporting, Coupon Payment) using ***VBA, Python and SQL***, incorporating a control view of risk mitigation strategies
* Effectively led a team responsible for margin call dailies, reconciliation, and collateral eligibility checks against agreements like CSA/GMRA, utilizing data analysis and visualization to identify risk areas and optimize collateral management strategies
* ***Instrumental in winning over $1 Billion AUA in new business*** due to improved operations and enhanced client experience through ***data-driven process optimization and automation***

**Bank of Montreal**  *Toronto, ON*

Associate, Business Analyst *Jun 2018 – Jul 2019*

* Leveraged data analytics to identify comprehensive insights, aiding in better risk management and decision-making
* ***Achieved F1 score of 89%*** in predicting the repayment abilities of credit applicants with ***logistic regression and random forest models***
* ***Improved efficiency by 30% and reduced cost by 15%*** by automating reconciliation process of data manipulation and strategy applying in ***VBA***

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EDUCATION

**Machine Learning/AI Bootcamp,** [Jiuzhangsuanfa](https://www.linkedin.com/company/jiuzhang/) *2021 - 2022*

**Master of Finance,** Saint Mary’s University *2012 - 2013*

**Bachelor of Science in Traffic Equipment and Information Engineering,** Central South University *2008 - 2012*