HARRY CHANG

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EDUCATION

National University of Singapore (NUS)   **Aug 2020 – May 2024 (Expected)**

- Bachelor of Science in Data Science and Analytics with Honours
- Internship Availability: May 2023 – December 2023
- Relevant Courses Completed: Data Science in Practice, Data Visualisation, Database Technology and Management, Mathematical Statistics, Multivariable Calculus, Machine Learning, Statistical Learning, Regression Analysis

TECHNICAL SKILLS

- **Programming**: R, Python, SQL (MySQL, PostgreSQL), Java, Stata
- **Data Visualisation**: R (ggplot2), Python (seaborn), Tableau, Power BI, Gephi
- **Statistical Tools**: R, Microsoft Excel, MATLAB, Google Analytics, Stata
- **Database Management**: MySQL, PostgreSQL, Firestore (NoSQL)
- **Cloud Platforms**: Google Cloud Platform, Amazon Web Services
- **Design Tools**: Canva, Figma

WORK EXPERIENCE

Actuarial Intern, SCOR   **May 2022 – Aug 2022**

- Performed various actuarial analysis of reinsurance treaties of various APAC markets, including entry of client portfolio and loss data into xAct (treaty pricing system)
- Regularly updated and analysed risk profiles and claims databases for insurance markets in Pakistan, Thailand and Vietnam
- Trained machine learning models (logistic regression, random forest) to assist insurance firms in predicting purchase trigger events made by insurance clients, with an average accuracy of 80% for each model

Data Analytics Intern, Quest   **Feb 2022 – May 2022**

- Conducted cohort analysis to optimise user acquisition and retention rates for company's flagship mobile application
- Collected, analysed and interpreted trends within user data to improve company's growth and marketing strategies
- Created visualisations and dashboards using RStudio and Tableau to report key metrics of mobile application's monthly performance to company's management team

Data Migration Intern, Immigration@SG LLP   **Oct 2020 – Jan 2021**

- Performed data cleaning of over 30,000 records using Excel and Python (pandas) to facilitate smooth data migration into new customer relationship management (CRM) system
- Derived customer segmentation models using machine learning techniques (regression, decision trees, market basket analysis) to improve company's marketing strategies
- Completed time series analysis using past sales data to forecast future monthly revenue

ACADEMIC PROJECTS

Predicting HDB Resale Prices with Machine Learning   **Sep 2022 – Nov 2022**
- Performed feature engineering by adding additional features, including distance from flat to closest train station to improve overall model performance and accuracy
- Compared performances of regularised regression models (Ridge, LASSO) and k-nearest neighbours to assess better model feasibility to predict resale house prices
- Tools used: Python (pandas, scikit-learn, geopy), R

Exploratory Data Analysis on Spotify Data   **Feb 2022 – Apr 2022**
- Plotted line charts and faceted donut charts to feature distribution of different genres of songs across 4 seasons to investigate relationship between number of songs produced and season which songs are released in 6 music genres
- Produced ridgeline faceted density plot and boxplots to assess feasibility of song variables as informative inputs into classifier algorithms to predict song genres
- Tools used: R (dplyr, ggplot2)

COMPETITONS

NUS LifeHack – Theme Best (Safety)   **Jul 2022**
- Collaborated with 3 other computing undergraduates to ideate mobile application to address drowsy driving by keeping drivers awake
- Awarded second place overall out of 117 team submissions for annual hackathon

NUS FinTech Month Hackathon 2021 – 1st Runner-Up   **Jan 2021**
- Attained second place overall after overseeing a team of 3 other undergraduates to develop a multi-pronged approach for improved fraud detection in complex entities
- Proposed a blockchain accounting framework to monitor outgoing transactions through the integration of rule-based systems, encrypted hash algorithm and unsupervised machine learning (k-means clustering)

LEADERSHIP AND CO-CURRICULAR ACTIVITIES

Marketing Director, NUS Statistics and Data Science Society   **May 2021 – Apr 2022**
- Led a team of 10 undergraduates to execute various marketing communication strategies and increase society's social media outreach
- Secured $19,000 worth of prize sponsorships from Grab, AI Singapore and Quest Ventures to organise Data Analytics Competition which attracted 850 student participants from local universities
- Increased society's merchandise sales revenue by 45% compared to previous year

Deputy Head of Finance, Google Developer Student Clubs NUS   **Sep 2021 – Apr 2022**
- Compiled budget from various teams and liaised with staff advisors to ensure sufficient funds and appropriate spending for Tech-for-Good Workshops and Hack-for-Good Hackathon