Cogal Jacques Tracy Pasaol

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EDUCATION

School of Computer Science and Engineering and Nanyang Business School   **Aug 2020-Present**
Nanyang Technological University, Singapore
Double Degree Programme
Bachelor of Engineering (Computer Science) and
Bachelor of Business (with specialization in Business Analytics)
Graduating in May 2024

Temasek Polytechnic   **Apr 2015-Apr 2018**
Accounting and Finance (Diploma with Merit)

WORK EXPERIENCE

JP Morgan   **Singapore**
Software Engineering Intern   *Jun 2023-Aug 2023*

Zuellig Pharma   **Singapore**
Data Analyst Associate Specialist, Part-time   *Sep 2022-Dec 2022*
Tool(s) Used: Python, Spyder IDE, SQL Database, Tableau
Prepared and cleaned vast amounts of data from different sources for use in machine learning operations.

Novelship   **Singapore**
Strategy/Business Analyst Intern   *May 2022-Aug 2022*
Tool(s) Used: Python, Tableau, Tabcmd.exe, Jupyter Notebook and SQL Database
Pioneered use of Python and Tabcmd.exe for automating the extraction and processing of vast amounts of
data for a newly developed key index that tracks the bid-ask spread of our market

- Initiated preliminary research on competitors and scraped the web for comparative data
- Created Tableau views suitable for extraction by Tabcmd.exe
- Optimized view refresh time by extracting relevant data with custom SQL queries
- Developed durable, modular and reliable code to get the index with the future in consideration
- Presented and justified methodology in weekly strategy meetings
- Collaborated with Data Engineers to implement live code

Deloitte Touché Tohmatsu Limited   **Singapore**
Auditor Intern   *Dec 2017-Feb 2018*
Created audit documents, mentored peers and performed ad-hoc audit duties for seniors

PROJECTS

Fitness and Nutrition android App (Java, Kotlin, Database Management and **UML Diagraming** with **Android Studios, Firebase** and **Visual Paradigm)**
Tasked with creating a cloud-based program. Decided upon a fitness and nutrition navigation and logging android application.

- Ideated functional and non-functional requirements for our app
- Generated use case statements and diagrams
- Made class and sequence diagrams
- Coded in android studios and explored Java and Kotlin implementations
- Designed UI in xml with android studio
- Used Firebase for authentication and as our cloud database

University Social Get-together App (Frontend and Backend Web Development using React.js and Firebase)
Addresses the lack of social connection between University students. By being a platform exclusive to them where they can decide what activity, where to meet and what time to meet.
- Fulfilled role of lead software engineer
- Controlled server access and github push pull requests
- Coded the toughest components including chat, google map API call and routing all the pages

Bank Risk Analysis (Analytics, Machine Learning and Visualization using Python, MySQL and Tableau)
A competition conducted by Deloitte Touché Tohmatsu Limited and Business Analytics Club. We were tasked with analyzing bank books for fraud after a whistleblower callout. The team leader of 2nd-runner ups out of 32 potential teams.
- Created risk profiles based on pertinent information
- Normalized, cleaned and then queried given datasets for relationships in MySQL
- Used CatBoost, Random Forest and Quantile Regression models as solutions for automatic detection of fraud and narrowing scope of audit work
- Created graphs and visualizations on Tableau to impart business insights to stakeholders

Hotel Overbooking System (Analytics and Machine Learning in Python and R)
Using machine learning models to predict no-shows to overbook effectively; minimizing dissatisfaction and maximizing revenue
- Explored the data for outliers and any other peculiarities for cleaning and further analysis
- Trained CART, Logistic regression, Random Forest and Neural Networks on dataset
- Used F-score and confusion matrix to justify the use of Random Forest as superior model in our scenario
- Presented prototype as a viable alternative to traditional careless overbooking practices

Movie Revenue Prediction (API Management, Analytics and Machine Learning with Python)
Made use of movie database API with a document database to predict if a movie is a worthwhile venture for investors
- Extracted documents from movie database recursively for a random sample of movies
- Cleaned the data to exclude outliers or entries with essential missing information
- Manipulated dataset so they can be used as input for existing machine learning model

SKILLS

Programming Languages and Frameworks: Python, Java, React.js, Javascript, R, C and C++

Databases: MySQL (SQL), MongoDB (NoSQL) and Firebase (NoSQL)

AWARDS AND HONOURS

Champions of J.P Morgan Global Hackathon Singapore 2023   2023
Team and frontend lead for a proof of concept serving internal stakeholders

Champions of J.P Morgan Code for Good 2022   2022
Designed, developed and deployed solution to address social enterprise problem in React.js, React Native, Node, Heroku and MongoDB

2nd Runner-up for Business Analytics Hackathon, NBS BAC and Deloitte   2022
Analyzed, reported, and presented risks in a bank's books after whistleblower tip incorporating machine learning models as a novel risk monitoring tool