

ZHONGMANG CHENG

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Mathematics specialist from University of Toronto, Data analyst, Critical thinker

PROFILE & SKILLS

- Rigorous mathematical education that is proof-heavy; Strong interest in comp sci. and data science; Knowledge of microeconomics and individual market behavior
- **Language:** English, French (7-years francophone education), Mandarin
- **Python:** Data structures, object-oriented programming | `math matplotlib re os pyautogui`
Manipulate million-level dataframes of text and binary format | `pandas numpy sqlparse cx_Oracle`
- **R:** Creating plots and contingency tables; Statistical inference, data visualization | `spldf ggplot`
- **SQL:** Extracting data, filtering data, analyze nested SELECT statements | Oracle Database, ODBC
- Miscellaneous: RegEx, LaTeX, DrRacket, Free Pascal, JavaScripts, MatLab, Anaconda, Jupyter Notebook, PyCharm, Spyder, RStudio, Arduino IDE, Tableau, Sub-one minute solving 3x3 Rubik's, MS Office

EDUCATION

UNIVERSITY OF TORONTO, H.B.SC. HONOURS BACHELOR OF SCIENCE

SEPTEMBER 2019 – JUNE 2023 (EXPECTED), TORONTO, cGPA 3.78/4.0

Mathematics & Its Applications Specialist (Probability/Statistics)

Mathematics Major

DAWSON COLLEGE, D.E.C. DIPLÔME D'ÉTUDES COLLÉGIALES

SEPTEMBER 2017 – JUNE 2019, MONTREAL, R-Score 31.688

Pure and Applied Science (200.P2)

EXPERIENCE

DELOITTE TOUCHE TOHMATSU LIMITED, ANALYST INTERN

JULY 2021 - PRESENT, TORONTO

- Perform model validation for The Bank of Nova Scotia
- Analyze anti money-laundering scenarios, assess the tuning methodology used in the threshold
- Jurisdiction of the scenarios includes: Cayman Islands, Dominican Republic, Jamaica
- From Oracle Mantas database, extract transaction data including cash transactions, wire transactions, and transactions from monetary instruments
- Filtered through about 4,000,000-20,000,000 entries of transactions depending on the time period
- Perform data quality assessment and data lineage, check the integrity of the data
- Sampling alerts with the threshold and the data extracted, spot potential errors and misfires
- Communicate with model developer, verify the reasoning of the model

SUNLANDS TECHNOLOGY GROUP, QUALITY ASSURANCE INTERN

JULY 2019, PEKING

- The company is an online post-secondary education service that offers programs in accounting, finance, and management
- Monitored sales and customer service through an integrated call recording system (~100 records/day)
- Filed reports about aggressive sales tactics; helped improved customer experience
- Filtered through about 50000 entries of customer's information exported from SQL
- Create pivot tables from the data mentioned above; analyzed the performance of 6 different sub-division of the company based on pivot tables
- Help detected a flaw in the awarding system of the company that can be potentially exploited by the employees; gave a presentation within a group of 5 people including my superior; lead the discussion and draw a conclusion on what could be done about the issue

CO-CURRICULAR

MANAGEMENT, UTACG – A STUDENT ORGANIZATION

OCTOBER 2019 – PRESENT, TORONTO

Helped organized an on-stage show with dozens of participant and hundreds of spectators

Responsible for properly allocating funds and purchasing necessary materials for the organization

SHAREHOLDER, L'ÉCLIPSE – A JUNIOR ACHIEVEMENT COMPANY

OCTOBER 2016 – MAY 2017, MONTREAL

A student company coached by professional business consultant

Collaborated in a 16-people group to work throughout all stages of running a business

Ranked as the top profitable business among participants from all across Quebec

Achieved an average ROI of 540% to 30 shareholders

ACADEMIC PROJECTS

COMPUTER SCIENCE

- INTRO TO COMP SCI. - Paired with a partner to create the python game "Blocky", with the objective of learning the data structure of binary trees
- COMPUTATIONAL THINKING - Implemented a recursive maze generator using DrRacket

ECONOMICS

- MICROECONOMIC THEORY - Conducted an analysis that studies the impact of the potential merger between Aurora Cannabis and Aphria Inc.
- PRINCIPLES OF MACROECONOMICS - Analyzed impact of the interest rate cut, the purchase of 10-billion worth of securities, and the 2-trillion stimulus by the US federal government during the COVID19

PHYSICS

- ENGINEERING PHYSICS - Collaborated in a project with a group of 4 people; built an Arduino robot using infrared detectors, responsible for coding the program used on the robot