

MARCO ZHUANG

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<https://github.com/Marcozc19/public.github.io/>

EDUCATION

Cornell Tech (Cornell University), New York, NY
Dual MSc in Computer Science and Information Science

May 2025

- **Honors/Awards:** Merit-based Scholarship
- **Relevant Courses:** Machine Learning Engineering, Algorithm & Data Structure, Applied Data Science, HCI Design, NLP(spring)

Tsinghua University, Beijing, China

Jun 2023

BEng in Industrial Engineering

- **Honors/Awards:** government merit-based scholarship (1 of 15 recipients state-wide, 2021); Tsinghua outstanding sports performance scholarship (2020, 2021); Tsinghua outstanding social work scholarship (2021)
- **Leadership Experience:** Class President (2020-2021); Student Government member (2019-2021)

TECHNICAL SKILLS

Coding Language: Python, SQL, R, C, C++, PostgreSQL

Other Tools: Gurobi, Pandas, Github, Keras, Tensorflow, Scikit-Learn, Anylogic, Power BI

EXPERIENCE

Bytedance, Product Management Intern, Beijing, China

Mar 2022 – Aug 2022

- Conducted user profiling on 6 competitors through 200+ user surveys, concluded 4 general user habits, finalized platform user interface design, UGC tool kit logic, and overall launch strategy.
- Co-lead 31 expert interviews, compiled 7 user and content trend, ideated 15 content ideas, 3 were adopted and launched with the product, reaching of 10,000 MAU within a month.
- Synthesized investment thesis, competitor analysis, and product performance evaluation into the internal pitchbook, resulting in a long-term product collaboration.
- Generated a 15-page report to evaluate upstream partnerships through direct liaison with founders and independent market research; presented results to 6 department directors.

WeWork, Business Intelligence and Data Analyst Intern, Shanghai, China

Jun 2021 – Sept 2021

- Initiated the WeWork China sales funnel project; developed detailed data-driven roadmap to streamline the end-to-end sales process by identifying and solving bottlenecks using SQL and PowerBI, decision increased customer conversion rate by 15%.
- Optimized product offering and pricing by conducting competitive analysis of the Shanghai co-working office market through data collection from 20+ onsite field research and 15 annual reports.
- Built 7 financial models to assess branch profitability in Hong Kong, which informed 3 closures and 2 new openings.

PROJECTS

Operations Research - Visual Attractiveness Optimization in CVRP Research, (Python)

Sep 2022 – Jun 2023

Final Thesis for undergraduate study, collaborated with city sanitation company on a CVRP project

- Developed two-phase algorithm (Saving Algorithm & GLS) using python with novel visual attractiveness objectives for city garbage pickup truck routing problem, optimized proposed objectives by 10.7% and 98.4%.
- Authored 70-page paper with proposed mathematical model, algorithm design, case analysis, and discussion.

Data Analysis - McKinsey QuantumBlack Hackathon, (Python, Gurobi)

May 2023

McKenzie 24-hr data hackathon using real-time business case

- Collaborated closely in team of 3, designed mathematic model for manufacture optimization case.
- Developed solution algorithm using Gurobi in Python, successfully solved 2 out of 3 scenarios, achieving third place among 15 teams.

Data Analysis - CDC Heart Disease Indicator Analysis, (R, Python)

Feb 2022 – Jun 2022

- Reduced 18-dim features to 5 interdependent variables using PCA and FA, eliminating possible collinearity.
- Built multiple prediction models to evaluate reduced dimension dataset, achieved 95% accuracy rate using logic regression.

Machine Learning - Wind Turbine Reliability Prediction Project, (Python, Scikit-Learn, Keras)

Sept 2021 – Jan 2021

- Processed 40 GB+ raw data containing 4 million+ rows of 75-dim blade characteristics using Fast Fourier Transformation in python.
- Built and trained CNN model in Python; integrated transfer learning over 25 randomly divided subsets; resulted in 95% accuracy rate.

EXTRACURRICULAR ACTIVITIES

BanQu APP - Student Networking Platform Startup, Head of Business Development, Beijing, China

Oct 2020 – May 2021

- Grew user interest by 400% via generating partnerships with 2 universities (THU, PKU) and accessing 8,000+ students.
- Collaborated with 11 overseas software engineers to develop and refine product features prior to beta launch.

ADDITIONAL INFORMATION

Languages: English (Native), Mandarin (Native), German (Fluent), Spanish (Basic)

Achievements- Basketball - winner of state-wide high school league 2018, Shanghai Jr.NBA Most Improved Player 2019, Football - Team Captain 2019, Piano - Level 10 Certification from Shanghai Conservatory of Music