

Juliette Wong

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Data-driven engineer transitioning into data analytics with 4+ years working on data quality, metrics validation, and dashboards for large-scale analytics platforms at **Mastercard**. Experienced in SQL (Snowflake, Postgres, SQL Server), statistical analysis (regression, classification, forecasting), and data visualization (R, Matplotlib, D3.js, Tableau). Currently pursuing the **Georgia Tech Online MS in Analytics**, with projects in time series forecasting, simulation modeling, and business analytics.

EXPERIENCE

Mastercard

Software Engineer, Quality II (Data Quality & Analytics)

New York, NY

Mar 2023-Present

- Validated data quality for large-scale analytics platforms, ensuring accuracy and consistency across Snowflake and Postgres and reducing recurring defects in pipelines
- Implemented and executed SQL-based validation for complex benchmark, metric, and calculation logic against expected business outcomes, ensuring alignment with business logic for stakeholders across 3 products
- Spearheaded a focus group of 5 engineers to improve test data generation, aligning test datasets more closely with real-world production behavior and supporting four product offerings
- Coordinated a 4-person automated test audit to identify gaps in and prioritize coverage on critical pipelines, increasing automated test coverage by over 35%
- Proactively addressed high-priority bugs, performing root-cause analysis and coordinating fixes with engineering and product teams to ensure smooth rollout of solutions

Software Engineer, Quality I

Aug 2021-Feb 2023

- Identified test scenarios and executed test plans to ensure smooth rollout of new features for Mastercard Intelligence Center, a self-service analytics platform for more than 500 clients that displays client transaction, fraud, and digital payments data
- Built and maintained Splunk dashboards to monitor performance, usage, and exception patterns; partnered with engineering and product teams to investigate anomalies and decrease client complaints by 30%

EDUCATION

Georgia Institute of Technology

Master of Science in Analytics

Expected December 2026

GPA: 4.00/4.00

Relevant Coursework: High-Dimensional Data Analytics*, Data and Visual Analytics, Computational Data Analytics, Simulation

Carnegie Mellon University

Bachelor of Science in Mathematical Sciences

May 2021

Concentration in Operations Research and Statistics, Minors in Human-Computer Interaction and Chinese Studies

GPA: 3.89/4.00, Dean's List: All Semesters

PROJECTS

Noisy Data, Noisier Neighbors: Decoding Urban Noise in NYC's 311 Data

Team Project for CSE-6242: Data and Visual Analytics

Sept-Nov 2025

- Analyzed 10 years of NYC's 311 noise complaint data and integrated construction permit and event datasets to identify spatiotemporal trends and forecast future complaints using a tensor-based (CP decomposition) modeling approach
- Designed the interactive visualization layer, building a D3.js choropleth map and three other dynamic charts that filter by time, location, and complaint type, enabling exploration of both historical and forecasted complaint patterns

Discrete Flu Epidemic Transmission

Individual Project for ISYE-6644: Simulation

Nov-Dec 2024

- Developed a discrete-time stochastic simulation in Python to model flu transmission in a 61-student classroom using a binomial infection process and SIR framework
- Performed scenario analysis on vaccination status and contact patterns, generating statistical summaries to evaluate epidemic length and total infection rates over 1000 simulated outbreaks

UFC Fight Prediction

Team Project for MGT-6203: Data Analytics in Business

Feb-May 2024

- Led data cleaning and aggregation (streaks, cumulative performance) of 20+ years of UFC fight data in R, and joined 10 years of pay-per-view (PPV) data to model PPV drivers with linear regression
- Compared feature selection approaches and identified key factors influencing PPV sales

SKILLS

Programming: SQL, Python, R, D3.js

Analytics and Modeling: Regression, Classification, Time Series Forecasting, Cross-Validation, Model Evaluation

Data: Data Cleaning, Data Validation, Exploratory Analysis, Dashboards, Reporting

Tools: Snowflake, Postgres, SQL Server, Splunk, Tableau, Jira, Confluence, Jupyter, Microsoft Excel