Juliette Wong

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Data-driven engineer transitioning into analytics and data product roles, with 4+ years of experience supporting enterprise analytics platforms at **Mastercard**. Skilled in validating complex metric logic, investigating data integrity issues, and partnering cross-functionally to deliver reliable insights. Interested in leveraging statistical modeling, experimentation, and machine learning to inform product strategy and create measurable business value. Currently pursuing the **Georgia Tech Online M.S. in Analytics**.

EXPERIENCE

Mastercard **New York, NY**

Software Engineer, Quality II (Data Quality & Analytics) *Mar 2023-Feb 2026*

- Analyzed and validated complex benchmark and metric logic using SQL across 3 analytics products, ensuring KPI accuracy while maintaining strict adherence to data privacy and regulatory compliance standards
- Investigated cross-database inconsistencies across Snowflake and Postgres, identifying recurring data integrity issues and reducing pipeline-related reporting defects through targeted root-cause analysis
- Led rollout strategy with product managers and engineering leads for feature release involving synchronized application and database schema changes, ensuring backward compatibility across shared environments and minimizing client disruption
- 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 to improve reliability of client-facing KPI outputs
- Coordinated a 4-person automated test audit to identify gaps in and prioritize coverage on critical pipelines, increasing automated test coverage by over 35%

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 Slunk dashboards to analyze performance, usage, and exception patterns; presented recurring trends to product and engineering teams, informing roadmap prioritization and reducing client complaints by 30%

EDUCATION

Georgia Institute of Technology

Master of Science in Analytics *Expected 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 & Data: Regression, Classification, Time Series Forecasting, Cross-Validation, Model Evaluation, Data Cleaning, Data Validation, Exploratory Analysis, Dashboards & Reporting

Tools & platforms: Snowflake, Postgres, SQL Server, Splunk, Tableau, Git, Jenkins (CI/CD) Jira, Confluence, Jupyter, Excel