

# Jingyan Jiang

## Data Analyst

Montréal, QC (open to relocation) | (343) 368-5809 | im.jingyanjiang@gmail.com | [LinkedIn](#)

### SUMMARY

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Master's graduate in Electrical and Computer Engineering with hands-on experience turning raw, unstructured data into clear insights. Skilled in Python (pandas, scikit-learn), SQL, and data visualization, with end-to-end project experience spanning data cleaning, analysis, machine learning, and interactive dashboards. Comfortable communicating findings to both technical and non-technical audiences. English (fluent), Mandarin (native), French (beginner, in progress).

### EDUCATION

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**Master of Electrical and Computer Engineering — University of Ottawa** 2024 – 2026

*Relevant coursework: Machine Learning, Data Science Applications, Advanced Software Testing*

**Bachelor of Software Engineering — Henan University, China** 2019 – 2023

*Coursework: Data Structures, Artificial Intelligence, Human-Computer Interaction, Software Quality*

### TECHNICAL SKILLS

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- **Languages & Querying:** Python, SQL, Java, JavaScript, R (basic)
- **Data Analysis & ML:** pandas, NumPy, scikit-learn, NLTK, gensim; clustering, classification, feature engineering, statistical evaluation
- **Visualization & Reporting:** Matplotlib, Seaborn, D3.js, Excel (PivotTables, charts); dashboard design
- **Tools & Workflow:** Git, Jupyter, Flask, REST APIs, Jenkins (CI/CD), JIRA

### DATA PROJECTS

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**News Clustering & Topic Analysis System** Python, scikit-learn, NLP

- Built an end-to-end pipeline to clean a large news-article dataset and transform unstructured text into structured features for analysis.
- Engineered features using TF-IDF and Word2Vec embeddings with TruncatedSVD dimensionality reduction to improve clustering efficiency.
- Applied and compared K-Means, DBSCAN, and NMF topic models, selecting optimal cluster counts via silhouette analysis, and surfaced cross-category themes.
- Built an interactive D3.js / Flask dashboard for non-technical users to explore clustering results.

**Crop Growth Environment Data Monitoring & Analysis System** Data analysis, full-stack

- Built a system to process and analyze multi-sensor agricultural data (temperature, humidity, wind, rainfall, soil moisture) combined with weather-forecast data.
- Implemented the analysis logic that turns raw sensor readings into actionable outputs — temperature warnings, drought forecasts, and irrigation recommendations for end users.
- Led overall system design (frontend + backend); work published as a paper in *Computer Systems Networking and Telecommunications*.

### WORK EXPERIENCE

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**Software Developer — Henan Futong Information Technology Co., Ltd.** Jul – Dec 2023

- Built and ran automated test and validation suites for a vehicle-monitoring system, achieving 85% coverage and ensuring data reliability across database operations.
- Performed integration and regression testing on database operations, collaborating with developers to resolve issues within a 24-hour SLA.

**Software Developer — Henan Zhongyuan Photoelectric Measurement & Control Tech Co., Ltd.** Mar – Jun 2022

- Developed automated validation for a student-information query system and tested database operations and user-facing reporting.