

MEHUL GUPTA

AI SYSTEMS / ANALYTICS / PRODUCT DELIVERY

From data to working products.

I build AI applications, interrogate the data behind them, and translate ambiguous needs into products people can use. My foundation is aerospace engineering; my current work bridges technical delivery and business decisions at NYU Stern.

Brooklyn, NY | Available January 2027 | Open to relocation

2M+

trip records analyzed

6 / 40

providers / evaluation points

Top 30

Ferrocampus 2025

Selected work

Click a case study to jump in.

01 V-Lab research assistant

Evaluation, implementation and iteration

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Source quality, requirements and delivery

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SQL, Python and interactive BI

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05 Aviation intelligence

D3.js, APIs and linked chart state

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06 Browser & extension

Desktop software and a published Chrome tool

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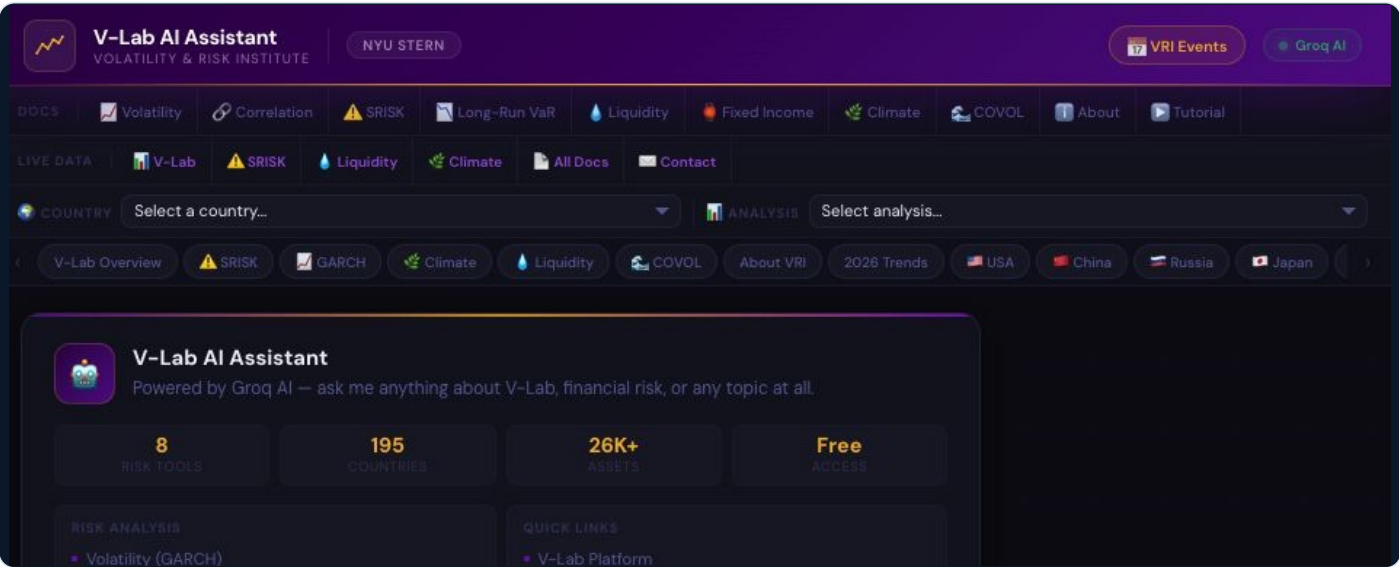
[GitHub](#)

[Tableau Public](#)

01 / PROFESSIONAL WORK

V-Lab research assistant

Graduate Assistant, Director's Office | NYU Stern Volatility and Risk Institute | Jan. - June 2026



Public demo excerpt: domain navigation, topic selection and an assistant interface. The demo is linked below.

THE PROBLEM

Make complex volatility, systemic-risk and illiquidity research easier to navigate without confusing a fluent response with a correct one.

WHAT I OWNED

Scoping, implementation, provider evaluation and post-launch iteration. I worked through three architecture iterations and benchmarked six providers with a 40-point rubric.

The decision that mattered

The first rubric rewarded fluency too heavily. I rebuilt the criteria, re-scored the providers, and presented a primary and a parallel option to faculty leadership.



After launch: review usage logs -> identify recurring coverage gaps -> prioritize routing and knowledge-base changes -> test again.

[Open public demo](#)

[View source code](#)

Evidence: 6 providers | 40-point rubric

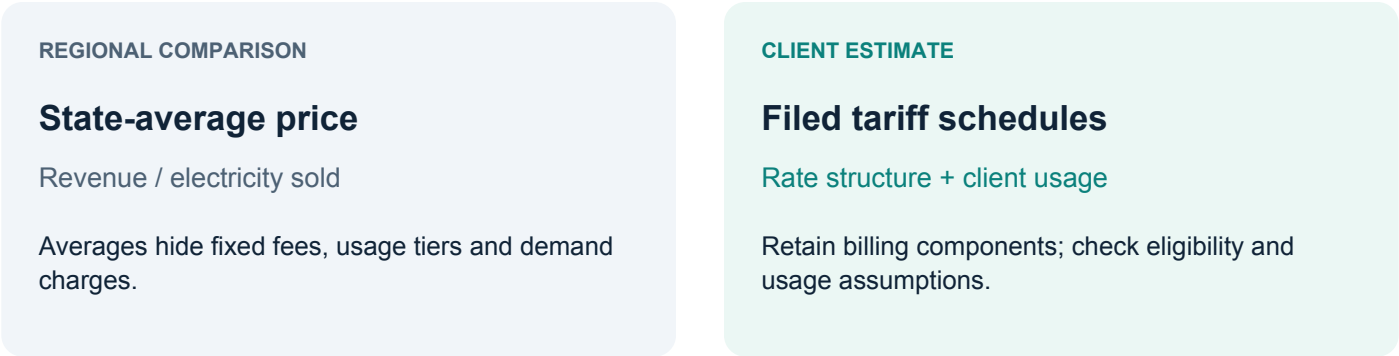
ROSI AI platform

AI Product Graduate Fellow | NYU Stern Center for Sustainable Business | Aug. 2026 - Present

I translate sustainability assessment needs into requirements, source-quality standards and implementation choices. The work includes four linked SASB/ROSI data tables, LLM/MCP prototypes, build-versus-license analysis and an alpha targeted for December 2026.

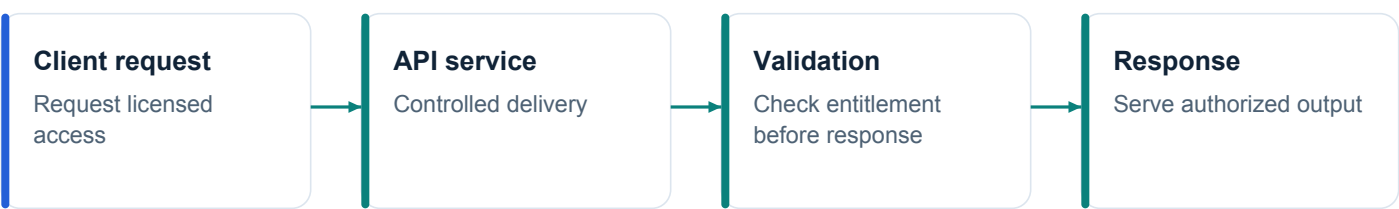
A clean source can still answer the wrong question

For a client electricity-cost estimate, state averages lost the billing structure that determines what the client pays. I shifted that input toward filed tariff schedules.

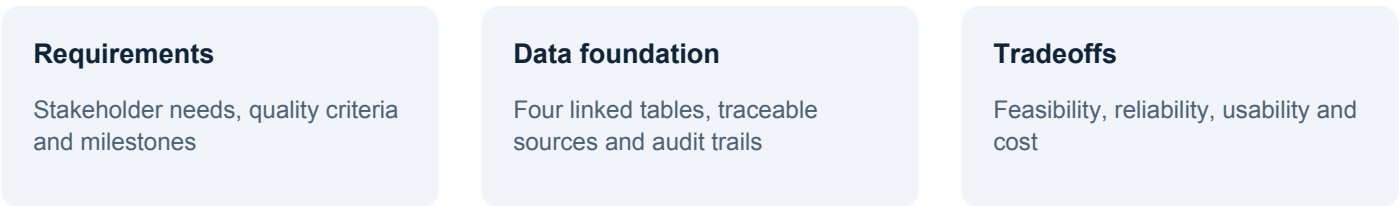


Turn a delivery preference into an enforceable requirement

I specified API-served licensing with server-side validation rather than delivery as static client files, documenting cost, access-control and latency tradeoffs.

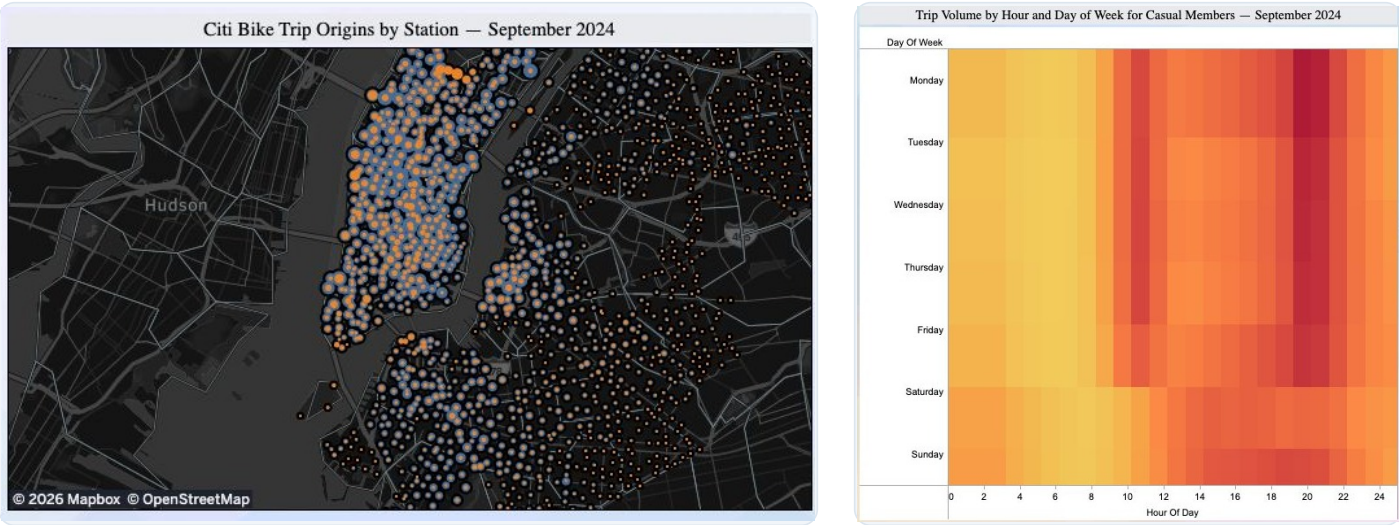


Delivery design schematic for the platform alpha targeted for December 2026.



Citi Bike analytics

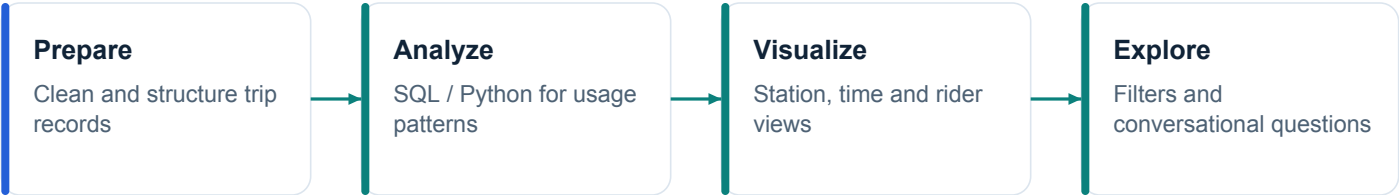
Python + SQL + Tableau | 2M+ trip records | Published dashboard with a conversational interface



Published dashboard excerpts: station origins and hour-by-day trip volume. Screens captured from my Tableau Public workbook.

Make a large dataset useful for operating decisions

I cleaned and analyzed trip records with Python and SQL, built visual views of station demand and rider behavior, and added a conversational interface for exploring the data.



QUESTIONS THE DASHBOARD SUPPORTS

- Where do trips originate, and which station clusters carry the most demand?
- How does usage vary by hour and day, and how do member and casual riders differ?
- How do trip duration and distance change across rider segments?

Analytical discipline: use segment and timing patterns to frame follow-up questions about station demand and operating needs.

[Explore live dashboard](#)

[More Tableau projects](#)

MaGic Filter

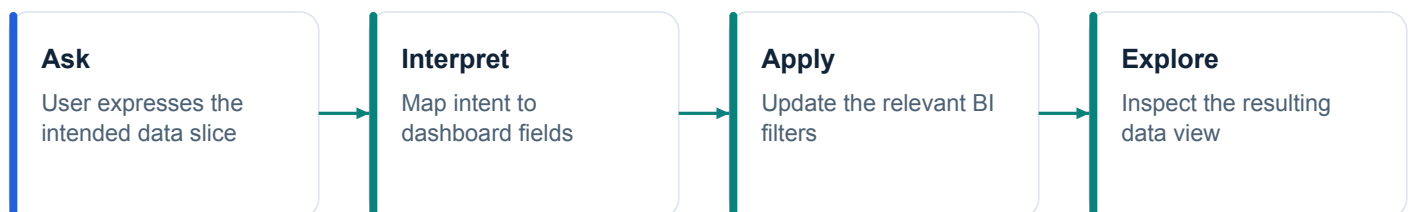
Natural-language filtering for business-intelligence dashboards

A user may know the question but still need several dropdowns to express it. MaGic Filter turns plain-language intent into dashboard filtering, connecting an AI interaction with the existing BI workflow.

INTERACTION DESIGN SCHEMATIC

"Show member trips on weekdays after 5 PM."

Illustrative filtering request and interaction design.



What I took from idea to practitioner feedback

- Built and deployed the natural-language filtering extension and demonstrated it to practitioners in the BI user community.
- Received interest from community leaders and an invitation to present at a regional user group.
- Used external feedback to understand integration friction and how people expect a dashboard interaction to behave.

What this demonstrates

Product discovery, dashboard integration, AI application delivery and clear technical demonstrations.

[Tableau developer community participation](#) | [See credentials and community, p. 12](#)

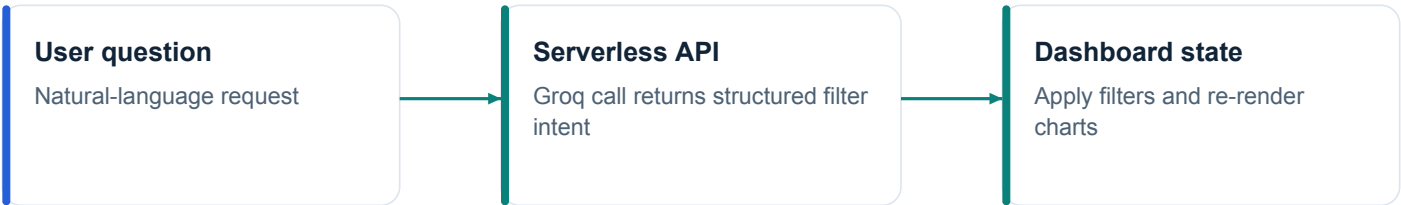
Aviation crisis intelligence

D3.js + JavaScript + Node.js APIs + Groq + Vercel | Public code and demo



Fuel-price view from the live visualization prototype. Values shown are prototype inputs.

I built a linked dashboard exploring fuel prices, airline economics and route disruption. The public implementation includes nine chart views, shared phase/region/carrier filters and a natural-language filter assistant.



Frontend: D3.js views and shared JavaScript filter state. Global controls and chart-specific controls support different levels of exploration.

Backend: a Node.js API proxy keeps the model key server-side. The response connects the chat interaction to chart filters.

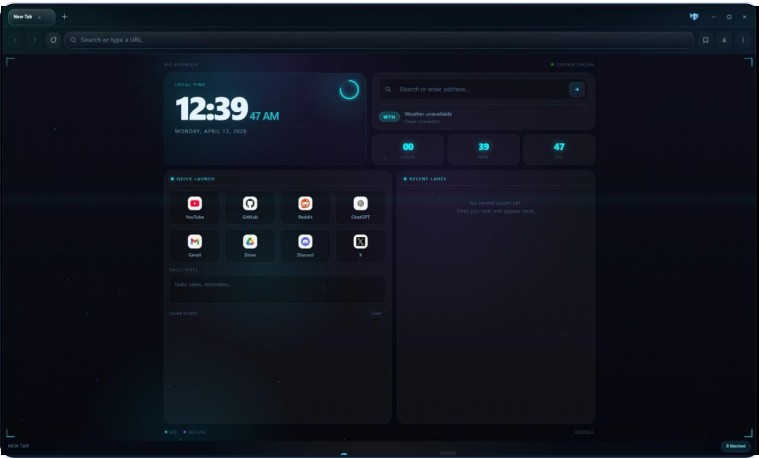
[Open live prototype](#)

[Inspect code](#)

9 chart views | 25 airlines | 8 phases

Browser and Chrome extension

M Browser for Windows and Mac | QR Code Generator Pro published on the Chrome Web Store



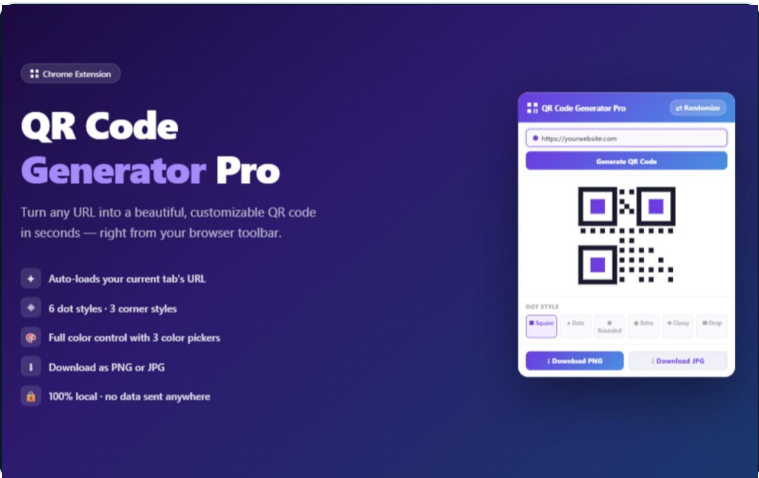
M Browser

Desktop project | Mar. 2026 - Present

Started with a PyQt foundation for browser navigation, tabs and desktop interactions. Reworked major architectural layers as the product expanded into privacy controls, ad blocking, packaging and platform-specific UI.

The engineering decision: adapt each version to Windows or Mac rather than force a single desktop interface. This project connects product design with system behavior, reliability and cross-platform delivery.

Actual M Browser homepage image published in my LinkedIn project gallery.



QR Code Generator Pro

Published Chrome extension | Apr. 2026

Built a toolbar tool that loads the current URL and generates customizable QR codes. Supports color and shape controls with PNG/JPG export. The published listing describes local processing without a server round trip.

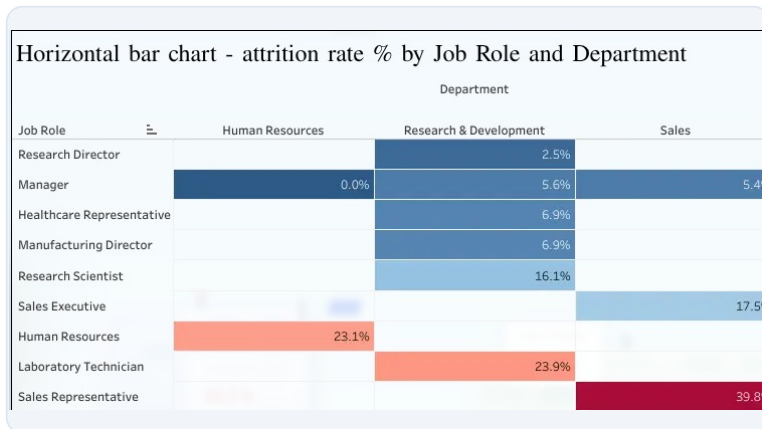
[View Chrome Web Store listing](#)

[M Browser project post](#)



Dashboards across business domains

Tableau dashboards and Power BI learning case studies, built for descriptive analysis and interactive exploration.

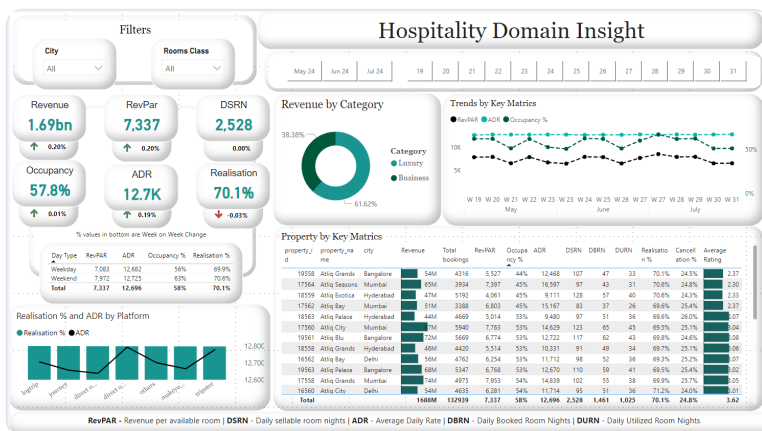


HR / people analytics

Tableau - sample employee dataset

Segment attrition by role and department, then explore income, age and overtime patterns. Turn a headline people metric into focused questions about employee segments.

[Open project](#)



Hospitality revenue

Power BI - guided Codebasics case study

Relate hotel, room and booking data; explore revenue, occupancy, ADR and RevPAR with slicers and weekly views. A practice case for metric design and commercial reporting.

[Open project](#)



E-commerce performance

Power BI - sample sales case study

Build a compact view of sales, profit, quantity, products and geography. Use segment and payment views to move from headline performance to the underlying mix.

[Open project](#)

[Also explore: AdventureWorks sales dashboard](#)

[Analytics companion source](#)

Macy's retail process strategy

NYU Operations Management | Service blueprinting, process strategy and quality measurement

In a four-person course team, I analyzed Macy's process strategy: how a high-volume retailer can improve flow while retaining personalized service. My contribution focused on service blueprinting, Heizer's process framework and the case for mass customization.

Connect the customer journey to the operating system

FRONTSTAGE / CUSTOMER EXPERIENCE

Queues, associate availability and fitting assistance

Map where the customer waits and where personalized service creates variability.

BACKSTAGE / OPERATING SUPPORT

Inventory visibility, system lag and team flexibility

Connect customer-facing friction to the processes, information and staffing behind it.

Translate diagnosis into a recommendation

I explored mass customization as a way to balance repeatable work with high-touch service. The team proposed cross-training and process changes, alongside a DMAIC-based checkout redesign and a cost-of-quality assessment.

QUALITY KPIS PROPOSED BY THE TEAM

Payment success

Successful payments / attempts

Payment time

Average time to complete payment

Crash frequency

Track online payment failures

97%

Proposed payment-success target for the academic case study. The recommendation defines what to measure when evaluating a checkout redesign.

[Read professor's public project summary](#)

A broader engineering foundation

Selected team, independent and academic work that complements the core case studies.

FLOWMIND AI / TEAM PROTOTYPE

Multi-agent approaches to rail congestion

Co-developed a simulation-based concept in a four-person team: predict congestion, guide passenger distribution and preserve operator oversight.

[Featured on NYU Tandon's innovation page](#)

TOP 30

Ferrocampus 2025
4-person team

Recruiter outreach system

Built an asynchronous Python outreach pipeline around an 8,000-contact database, with role-based attachment routing, rate limiting and duplicate-send prevention. The design served my own job search, so operational mistakes had an immediate user cost.



Workflow summary for an independent, asynchronous Python automation project.

Before software: aerospace engineering

Propulsion and wind-tunnel work using ANSYS, SolidWorks and Fusion 360, including Python automation. Co-authored a wind-tunnel paper (IJERT, 2024); fabrication leadership on a Guinness hydro-rocket project; NASA Space Apps Regional Gold (2023).

[Read wind-tunnel publication](#)

TEACHING / AUG. 2026 - PRESENT

Graduate Teaching Fellow

NYU Stern, FINC-GB 6043, Professor Menachem Brenner. Support futures/options instruction, office hours, problem sets and grading.

DELIVERY / NYU STERN VRI

275-attendee conference

Coordinated speaker, registration and on-site workstreams, connecting deadlines, stakeholders and execution under a shared event schedule.

SQL, Python and BI foundations

Public learning case studies show relational analysis, exploratory questions and reporting. Click through to inspect the code.

INSTAGRAM CLONE / 7-TABLE SCHEMA

Identity

users, follows

Content

photos, comments

Engagement

likes

Discovery

tags, photo_tags

ACTUAL QUERY / USERS WITH NO POSTS

```
SELECT u.username
FROM ig_clone.users u
LEFT JOIN ig_clone.photos p
  ON p.user_id = u.id
WHERE p.id IS NULL;
```

A LEFT JOIN preserves users; a NULL photo identifies an account with no posts.

Instagram-clone analysis

MySQL joins, aggregates, views and activity questions over a sample social schema.

[Inspect project](#)

Movie-industry Python EDA

pandas and visual exploration of budgets, gross, genre, release timing and derived margins.

[Inspect project](#)

Toolkit

Data and BI

Python, SQL/MySQL, Excel, Tableau, Power BI/DAX, pandas, NumPy; data cleaning, linked tables, source-quality checks and analytical communication.

MS, Management of Technology, NYU Tandon (Dec. 2026) | BE, Aerospace Engineering, Chandigarh University (May 2024) | Government of India full scholarship.

Selected certificates and developer-community participation are detailed on the next page.

NYC taxi HiveQL study

Schema and CSV-ingestion practice; grouped fare, tip, payment and hourly trip metrics.

[Inspect project](#)

King County housing

Tableau workbook and published repository visual for exploring a housing-sales dataset.

[Inspect project](#)

AI and product delivery

JavaScript, REST/LLM APIs, MCP, Git, Vercel; evaluation rubrics, requirements, release criteria, Jira and Confluence.

11 / CREDENTIALS, LEADERSHIP AND COMMUNITY

Learning that turns into delivery

Selected training, public recognition and community participation relevant to analytics, operations and engineering

NYU Data Science Bootcamp

Badge issued Dec. 2025 | 9-week program

Python, data preparation, EDA, SQL and applied ML, with weekly technical assignments and a collaborative solution presented to industry professionals.

[View credential](#)

Google learning certificates

Foundations of Data Science | AI Essentials

Foundations of Data Science and AI Essentials (Sep. 2024); Foundations of Project Management (Feb. 2022). Course-level credentials, selected from the full profile.

[View credential](#)

Autodesk engineering specialization

CAD / CAM / CAE | Jan. 2022

Mechanical engineering specialization covering Fusion 360 design, simulation analysis and manufacturing; complements aerospace and desktop product work.

[View credential](#)

Developer communities and practical learning

Published Chrome Web Store developer; participant in Tableau developer groups. Google DevFest / GDG workshops included hands-on agentic data-engineering patterns: data grounding, code-level guardrails, persistent state and independent evaluation.

[Read DevFest workshop post](#)

Leadership beyond the classroom

Chandigarh University Astronomy Club: Executive Council (Nov. 2021 - Jul. 2024) and Administrative Incharge (Jun. 2023 - Apr. 2024). Led a network of 4,000+ students/volunteers, collaborated with 20+ universities on Astronomy and Space Week, and secured support for observational equipment.

[Profile: experience, skills, awards and credentials](#)