Evolving Perspectives on AI and Data Storytelling

From Traditional Skillsets to Post-AI Learning Models

Traditional Courses in Data and Media

- 1. Two example courses:
- - Data-focused course: Technical skills in data analysis, visualization.
- - Media-focused course: Content creation, campaign design, audience insights.

- 2. Skill requirements:
- - Data: Numerical datasets, analytical tools, visualization techniques.
- - Media: Media assets, content tools, storytelling techniques.

Bridging the Two Disciplines

- • Both rely on crafting impactful narratives.
- • Differences lie in tools and content formats:
- - Data: Statistical rigor and analytical depth.
- - Media: Visual creativity and audience engagement.
- • Commonality: Both require insights and storytelling techniques.

Post-AI Transformation

- • AI automates technical tasks (e.g., analysis, visualization).
- • Emphasis shifts to higher-level skills:
- - Critical thinking.
- - Narrative crafting.
- - Ethical oversight.
- - Audience personalization.

Future Course Structure

- 1. Foundations of AI-Driven Data Storytelling.
- 2. Human-Centered Story Design.
- 3. Critical Thinking and Oversight in AI Outputs.
- 4. Ethics and Responsible Storytelling.
- 5. Collaboration Between Humans and AI.
- 6. Advanced Audience Personalization.
- 7. Innovation and Future-Proofing.

Key Takeaways

- • AI changes the skills required for data storytelling.
- • Focus shifts from technical expertise to strategy, creativity, and ethics.
- • Students become AI supervisors and storytellers.
- • Future-proof skills emphasize adaptability and innovation.

IDB

Inter-American
Development Bank

Development Program to Improve Infrastructure and Capability of Government Data/Statistical Offices in the Caribbean

[to be completed by Dec 2025]

CaribData Program [To be completed by Dec 2025]

Component 1. Data Infrastructure and Roadmap for Data Resiliency

Component 2. Data Science Training and Knowledge Generation

Component 3. Data Guidelines and Policies

Component 4. Project Coordination, Communication, and Evaluation

CaribData

THE UNIVERSITY OF THE WEST INDIES

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Angry Health

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1. **Stakeholder Interviews and Gap Analysis**
2. **Data Stories/Communications**
3. **Data Science Course**
4. **Datathon**
5. **Business Model**

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CaribData

1. Stakeholder Interviews and Gap Analysis

2. Data Stories/Communications

3. Data Science Course

4. Datathon

5. Business Model

Identify stakeholder's key requirements and immediate needs

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CaribData

IDB
Inter-American Development Bank

1. **Stakeholder Interviews and Gap Analysis**

2. **Data Stories/Communications:**
   - via website and communication strategy
   - one data story per month

3. **Data Science Course**

4. **Datathon** [

5. **Business Model**

How to craft engaging, data-driven regional narratives including how to communicate complex data in an accessible manner.

CaribData Program [To be completed by Dec 2025]

Angry Health

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CaribData

1. **Stakeholder Interviews and Gap Analysis**
2. **Data Stories/Communications**
3. **Data Science Course**
   - focusing on data communication / data journalism
4. **Datathon**
5. **Business Model**

Design & deploy engaging data-communications training including delivery mechanism?

Traditional Data Science Training

Introduction to Data Ecosystems and Roles

Data Collection and Survey Design

Data Curation

Data Provenance

Technology Systems Training [REDCap]

Data Analysis and Visualization

Traditional Journalism Training

Introduction to Journalism/Marketing

Content Creation and Campaign Design

Media and Information Curation

Story Sourcing and Fact Checking

Digital Tools and Platforms Training

Audience Analysis and Insights

Traditional Data Science Training		Traditional Journalism Training
Introduction to Data Ecosystems and Roles	→	Introduction to Journalism/Marketing
Data Collection and Survey Design	→	Content Creation and Campaign Design
Data Curation	→	Media and Information Curation
Data Provenance	→	Story Sourcing and Fact Checking
Technology Systems Training [REDCap]	→	Digital Tools and Platforms Training
Data Analysis and Visualization	→	Audience Analysis and Insights

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Senior/Advanced Level Combined Training

- Effective Data Storytelling
- Practical Applications and Projects
- Evaluation and Feedback

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- Evaluation and Feedback

Optional

- Mentorship and Coaching

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Data Collection and Survey Design

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Data Provenance

Technology Systems Training [REDCap]

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Effective Data Storytelling

Practical Applications and Projects

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Mentorship and Coaching

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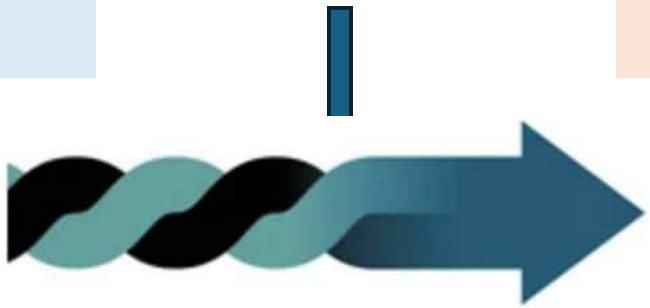

Introduction to Journalism/Marketing

Content Creation and Campaign Design

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Practical Applications and Projects

Evaluation and Feedback

Mentorship and Coaching

CaribData Training Curriculum [Dec Pilot - Feb 15th launch]

Problem-solving format
Content Applied via Self-Guided Exercises

4 components per module
a) introduction
objectives, learning outcomes
b) theory
description of content; text, videos, illustrations, etc.
c) self-Guided Exercises
examples, coding if applicable
d) assessment
automatic/instructor-graded quiz/assignment

Synchronous Online
10 modules over 10 weeks
Equivalent to 3 credit MSc module

Introduction to Data Ecosystems and Roles

Data Collection and Survey Design

Data Curation

Data Provenance

Technology Systems Training [REDCap]

Data Analysis and Visualization

Other Features
single case study throughout
responsive human/digital expert for Q&A assignment

To decide

- level of award e.g. PG/UG
- # of students [market size]
- size of cohort [class size]
- pricing [~US$4000]
- how many times per yr
- align course with Storython
- pre-requisites
- real-world capstone project
- mentoring/coaching

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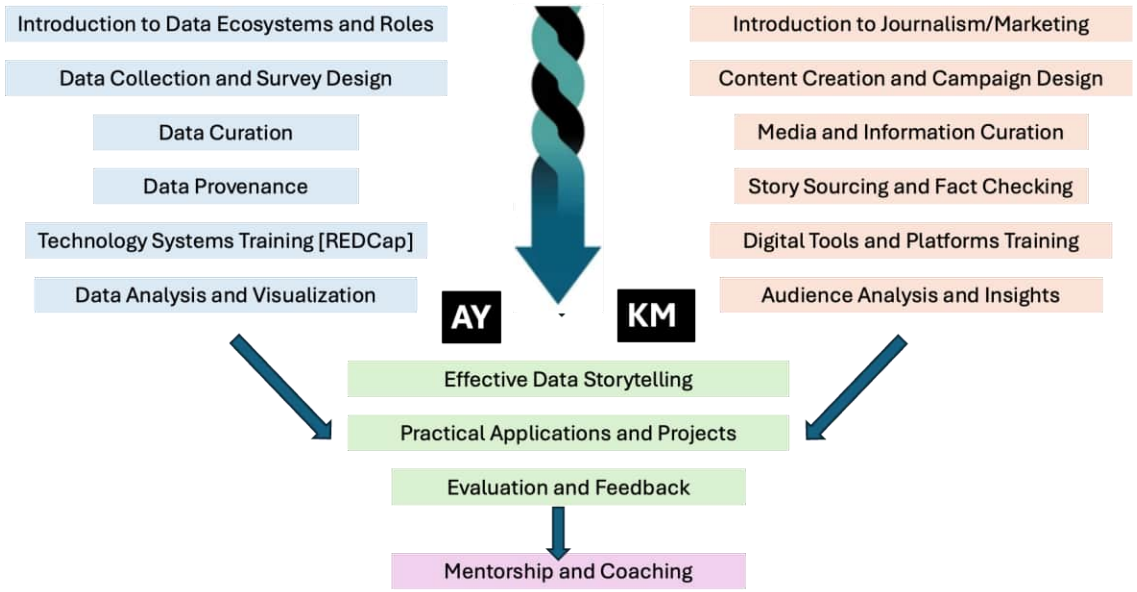
CaribData Data Science Course Overview



Training and Mentorship Curriculum [Nov pilot - Feb 15th launch]

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Technology Systems Training [REDCap]

Data Analysis and Visualization

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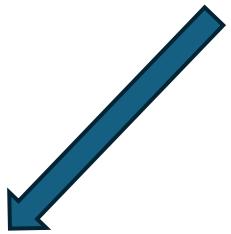


Evaluation and Feedback

Mentorship and Coaching

Role of Experts

Data Science - Ali Yalcin

Data Communication – Kevin Maurer

Quality Assurance
- review course content for relevance and accuracy
- is it up-to-date: latest trends, tools, societal changes
- provide feedback on how to improve it
- is the program “real-world”

Quality Control
- assess random selection of projects/submissions
- do they meet professional standards
- should we have peer-review process

“Experiential” Role
- contribute to case studies
- relate to actual work or global events
- how data is effectively used to tell powerful stories
- lead Q&A session[s]

Innovation & Improvement
- advice on how field is evolving, emerging trends
- end-of-course evaluation, overall effectiveness
- suggest improvements for future iterations

Program Credibility [permission to use name, role]:
- promotional materials, course descriptions, etc.
- co-sign certificates of completion

<u>Potential Course Themes</u>
- The Post-Truth World
- Crisis Training
- Storytelling in situations of urgent public interest
- pandemics, natural disasters, political crises
- how to analyze, present data under high-pressure

Communication Platform

Stage 1: Basic Data Storytelling Website with Training
Key Features:
• **Static website** for text and graphical data dissemination (charts, tables, etc.).
• Simple CMS (Content Management System) for easy updates.
• Basic training course for staff on data storytelling, ensuring they can present data insights in engaging ways.
• Standard analytics tools (e.g., Google Analytics) for tracking web traffic and user engagement.
Goal: A user-friendly, mobile-responsive site that delivers clear, accessible data stories while building internal capacity.

Stage 2: Interactive Visualizations and Basic Automation
Key Features:
•**Interactive charts and maps** that allow users to manipulate data or explore datasets visually (e.g., Plotly, Tableau Public).
•**Data query tools**: Basic functionality for users to query datasets (e.g., dropdown menus to filter datasets by date, region, etc.).
•Integration of simple automation for routine updates, like automatically refreshing the website with the latest data releases.
•Enhanced staff training in creating interactive visualizations.
Goal: Improve user engagement through interactive elements and automate routine data management tasks.

Stage 3: Personalized Data Dashboards and Automated Story Generation
Key Features:
•**Personalized user dashboards**, allowing users to save preferences and create custom reports from datasets.
•Introduction of **automated news story generation** based on predefined templates and key data events (e.g., population changes or economic shifts), leveraging basic NLP models for text generation (e.g., GPT-based summaries of data).
•Advanced analytics for better user experience insights (e.g., A/B testing of stories, heatmaps for user interaction).
Goal: Offer more personalized and dynamic experiences, reduce manual content creation through automated news generation.

Stage 4: Basic AI Newsreader with Dynamic Narratives
Key Features:
•Introduction of a **virtual human newsreader** (initially a simple avatar) that reads automatically generated data stories.
•**Speech synthesis technology** for natural language reading of news stories, with limited user interaction (e.g., voice commands or pre-set categories to choose from).
•Real-time data feeds from APIs to ensure up-to-date information is reflected in generated news.
Goal: Move towards more dynamic, AI-powered content delivery, making the experience more engaging through audio-visual elements.

Stage 5: Advanced AI-Driven Virtual Human Newsreader
Key Features:
•Fully animated, **photorealistic virtual human** newsreader with realistic facial expressions, gestures, and voice modulation (based on advanced avatar technology like MetaHuman or Unreal Engine).
•**LLMs** and **NLP** integrations to dynamically generate and present stories based on real-time data, allowing for complex user interaction (e.g., voice recognition, natural language dialogue).
•Customizable content experience: Users can ask questions or seek deeper insights during the news delivery process.
•Advanced analytics integration to track how users interact with the virtual human and how the content impacts audience understanding.
Goal: Provide a fully immersive, personalized news experience driven by AI, offering users a human-like interaction with data while utilizing the most advanced technology in content delivery.

Communication Platform

Considerations for the Transition:

1.Gradual Upskilling: Each stage would involve upskilling internal teams with the required technology, from basic data storytelling to handling AI and LLM integration.

2.Investment in Infrastructure: As the complexity of the solution increases, investment in server capabilities, APIs, and AI model hosting will grow.

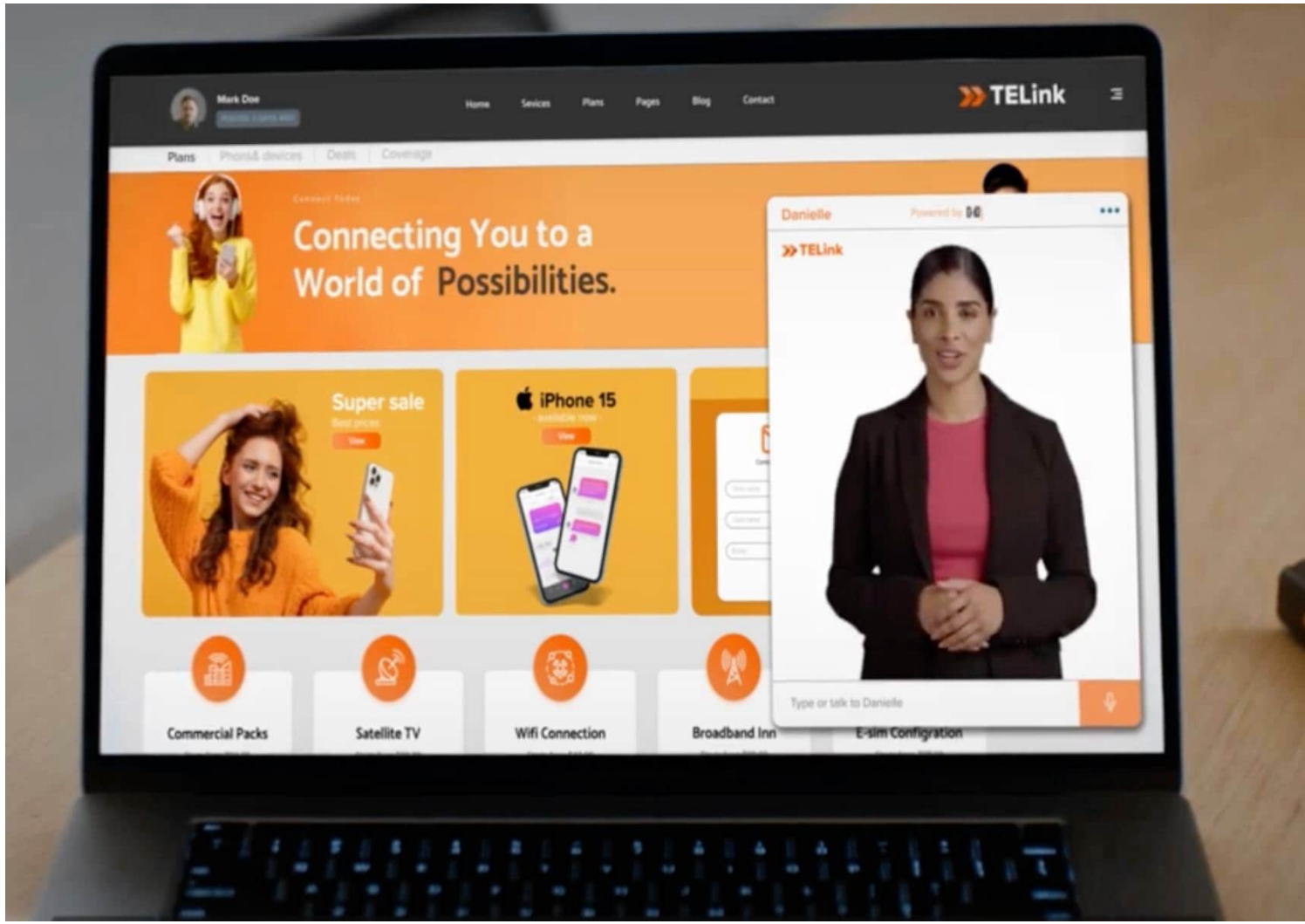
3.User Experience Evolution: Each stage enhances the user experience, allowing audiences to progressively engage with the content in more meaningful ways.

4.Financial and Technical Scalability: Each stage should be scalable, so early investments continue to support more advanced stages without requiring complete overhauls.

By following this phased approach, National Statistical Offices can start with a manageable MVP and evolve toward a cutting-edge solution in a financially and technically sustainable way.

VISION: Communication Platform

- AI-Powered Digital Newsroom
- Customized Digital Education Platform
- Interactive Policy Briefs
- Digital Crisis Communication Hub
- Virtual Town Hall Meetings
- Community Engagement Hub
- Digital Storytelling Archive
- Public Consultation and Feedback
- Interactive Public Service Announcements (PSAs)
- Virtual Civic Education Hub



https://www.youtube.com/watch?v=kr8hW3Vi7QM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