



**NYU**

**ROBERT F. WAGNER GRADUATE  
SCHOOL OF PUBLIC SERVICE**

## **PADM-GP.4322**

# **Data and AI Strategies for Social Impact Organizations Spring 2022**

### **Instructor Information**

- Rebecca Duane
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- Office Hours: By Appointment

### **Course Information**

- Class Dates: March 22 – May 9, 2022
- Class Meeting Times: Tuesday 6:45 PM - 8:25 PM
- Class Location: 194 Mercer St, Room 306A Loc: Washington Square

### **Course Prerequisites**

- None
- Other related courses: Performance Management & Measurement (PMM)

### **Course Description**

Data plays an increasingly important role in powering today's enterprises, governments and society. With the rapid pace of innovation, data science, advanced analytics and Artificial Intelligence (AI) are becoming increasingly central and critical to business today. Over time, social impact organizations will deem these tools as core to achieving their mission.

This course is designed for both non-technical and technical social sector leaders to leverage these powerful tools along with an organization's data footprint and external data sources to accelerate their organizations' impact. This course aims to develop students' understanding of what it takes to propel organizations along their journey to advanced use of data and AI.

New organizations may look to proactively build a culture of data from the start, while many established organizations may be navigating their digitization journey by putting new tech practices in place such as replacing paper systems with digital records, implementing Customer

Relationship Management (CRM) systems, or establishing Marketing Technology (MarTech) stacks to more effectively and efficiently communicate with stakeholders across different social channels.

Wagner students can play an important role in enabling organizations to meet the challenge of leveraging their digital footprint. This will help them more effectively communicate with stakeholders and funders, expand their donor and investor base, improve service delivery, innovate on products and program models, derive new insights to inform policy agendas, and leverage data for advocacy efforts.

### Course and Learning Objectives

The objective of this course is to enable future leaders in the social impact field to proactively lead their organization along its journey to AI through building an equitable and data-driven culture.

During this course, students will learn to:

1. Create a ‘data vision’ and ‘data mission’ that ties to a social impact organization’s central vision and mission
2. Explore approaches for assessing the data maturity of an organization
3. Identify opportunities for social impact organizations to pursue AI use cases
4. Understand equitable and inclusive data practices to support ethical and trustworthy AI
5. Instill a data-driven culture so data is part of the organization's DNA

### Overview of the Semester

<b>Class #</b>	<b>Topic</b>	<b>Date</b>
<b>1</b>	<b>Introduce and Define</b> – Unpacking terminology and overview of data journey to AI	<b>3/22</b>
<b>2</b>	<b>Engage</b> – Data Ethics, Trustworthy AI and best practices for working with data	<b>3/29</b>
<b>3</b>	<b>Collect and Organize</b> – The value of internal and external data sources to drive impact	<b>4/5</b>
<b>4</b>	<b>Analyze</b> – Use cases and appropriate applications of AI for deeper insights	<b>4/12</b>
<b>5</b>	<b>Manage and Infuse</b> – Practices and systems to sustain the advanced use of data and AI throughout the organization	<b>4/19</b>
<b>6</b>	<b>Prioritize</b> – Technology, capabilities and talent to	<b>4/26</b>

	catalyze the organization’s data journey	
<b>7</b>	<b>Synthesize</b> - Tie it all together	<b>5/3</b>

## Learning Assessment Table

Graded Assignment	Course Objective Covered
Class Participation	All objectives
Data Journey Plan & Feedback	#1, #2
Data and AI Initiative Proposal	All objectives with particular focus on #3, #4, #5

## Required Readings and Classroom Materials

### Required Readings & Media:

- Booz Allen Hamilton, [The Field Guide to Data Science](#), 2015. **Hereafter referred to as Field Guide.**
- Buolamwini, Joy. [How I'm fighting bias in algorithms](#). TedxBeaconStreet, 2016.
- [Data Ethics Canvas](#) Tool. Open Data Institute. **Hereafter referred to as Data Ethics Canvas.**
- Fine, Allison and Kanter, Beth. [Nonprofits and Artificial Intelligence - A Guide](#). NTEN. 2020. **Hereafter referred to as NTEN.**
- Fountaine, Tim, McCarthy, Brian and Saleh, Tamim. [Building the AI-Powered Organization - Technology isn't the biggest challenge. Culture is](#). Harvard Business Review, 2019. **Hereafter referred to as AI-Powered.**
- IBM Institute for Business Value, [Leap before you lag: Nonprofits with deeper data capabilities see stronger impact, transparency and decisions](#), 2017. **Hereafter referred to as Leap.**
- McKinsey Global Institute, [Applying artificial intelligence for social good](#), 2018. **Hereafter referred to as McKinsey.**
- [The Artificial Intelligence Primer: Distinguishing Hype from Reality in Our New Technological Era](#). Booz Allen, 2018. **Hereafter referred to as AI Primer.**
- Thomas, Rob. [The AI Ladder: Demystifying AI Challenges](#). O'Reilly Media, 2019. **Hereafter referred to as AI Ladder.**
- UN Global Pulse, [Big Data for Development: A Primer](#), 2013. **Hereafter referred to as UN Primer.**
- UN Global Pulse, [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016. **Hereafter referred to as UN Big Data.**
- Varshney, Kush R. [Trustworthy Machine Learning](#). E-book, 2021. **Hereafter referred to as Trustworthy.**

- Worsham, Erin, Langsam, Kimberly and Martin, Ellen. [Using Data to Power Scale](#). Scaling Pathways, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020. **Hereafter referred to as Scaling Pathways.**

#### Suggested Additional Readings & Media:

##### *Articles, Research & Comics:*

- Basker, Sian. [Data Evolution Project Report](#). Data Orchard, 2017.
- Broad, Ellen, Smith, Amanda and Well, Peter. [Helping organisations navigate ethical concerns in their data practices](#). Open Data Institute, 2017.
- DalleMule, Leandro and Davenport, Thomas. [What's Your Data Strategy?](#) Harvard Business Review, 2017.
- Google. [Accelerating social good with artificial intelligence: Insights from the Google AI Impact Challenge](#), 2019.
- Idealware. [Unleashing Innovation: Using Everyday Technology to Improve Nonprofit Services](#), 2012
- Julia Stoyanovich and Falaah Arif Khan. [We are AI Comics](#), Center for Responsible AI, 2021.
- Ladley, John and Redman, Thomas. [Use Data to Accelerate Your Business Strategy](#). Harvard Business Review, 2020.
- [NYC AI Primer](#), NYC.gov, 2021.
- PwrdbY, [The State of AI in the Nonprofit Sector](#), 2020.
- Salesforce.org Nonprofit Cloud, [AI for Good Nonprofit Trends & Use Cases](#), 2019.
- Technology Association of Grantmakers. [Roadmap for Funders: Investing in Digital Infrastructure](#), 2020.
- The Monitor Institute by Deloitte, [Re-imagining measurement: A better future for monitoring, evaluation, and learning in the social sector](#), 2016.
- [The Number One Question That CEOs Ask Us](#). Polynumeral, 2016.
- Varshney, Kush R., Mojsilovic, Aleksandra. [Open Platforms for Artificial Intelligence for Social Good: Common Patterns as a Pathway to True Impact](#), 2019.
- White, Andrew. [Design a Data and Analytics Strategy](#). Gartner, 2019.
- World Economic Forum. [Big Data, Big Impact: New Possibilities for International Development](#), 2012.

##### *Books:*

- Anderson, Carl. [Creating a Data-Driven Organization: Practical Advice from the Trenches](#). O'Reilly Media, 2015.
- Benjamin, Ruha. [Race After Technology](#). Polity Press, 2019.
- O'Neil, Cathy. [Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy](#). New York: Crown Publishers, 2016.
- Patil, DJ & Mason, Hilary. [Data Driven – Creating a Data Culture](#). O'Reilly Media, 2015.
- Thomas, Rob and Zikopoulos, Paul. [The AI Ladder – Accelerate Your Journey to AI](#). O'Reilly Media, 2020.

*Podcasts:*

- Benson, Chris, Whitenack, Daniel. [Practical AI](#).
- Flores, Felipe. [Data Futurology – Leadership and Strategy in Artificial Intelligence, Machine Learning, Data Science](#).
- Kilbertus, Niki. [Can a Machine Learn Inclusivity? That Depends on the Teacher](#). Digital Impact.
- Polich, Kyle. [Data Skeptic](#).
- Rank, Rachel. [What Does It Take to Be a Data Champion?](#) Digital Impact.
- Smith, Craig. [Eye on A.I.](#)
- Strong, Jennifer. [In Machines We Trust](#). MIT Technology Review.
- Vogel, Miriam. [In AI We Trust?](#) A podcast by EqualAI.

*Video:*

- Basker, Sian. [How to become a data-savvy leader](#). #Bemoredigital Charity Digital Leadership conference, 2020.
- [Co-Opting AI: Conversations About Design, Inequality, and Technology](#). Institute for Public Knowledge, New York University, 2019. (*Series with some Youtube clips*)
- Kantayya, Shalini. Feature documentary [Coded Bias](#). 7th Empire Media, 2020.
- Underwood, Hannah. [Data For Good](#).

## Assessment Assignments and Evaluation

### Class participation (25 points)

- Active contribution to discussion, learning and feedback (5 points)
- Personal Introduction (3 points)
- Reading Reflections (x4) (12 points)
- Discussion Lead (x1) (5 points)

### Data Journey Plan (30 points)

- Part 1 - Data Journey Plan (10 points)
- Part 2 - Data Journey Plan Feedback (x2) (10 points)
- Part 3 - Data Journey Plan “Feedback on the Feedback” (x2) (10 points)

### Data and AI Initiative Proposal (45 points)

- Team Presentation (15 points)
- Individual Use Case Evaluation (15 points)
- Team Final Submission (15 points)

## Assignment Instructions

### 1. Class Participation

To earn class participation points, you must complete a **Personal Introduction**, four (4) **Reading Reflections** and participate as the **Discussion Lead** for one (1) topic in class.

In preparation for class, each student must complete the required readings and write a brief reflection discussing at least one of the topics and post a summary in the Discussion Forum. Students must do this four times throughout the course. See the **Detailed Course Overview** section for the required readings. Your writing should demonstrate original thinking rather than simply provide a summary of the readings. Your reflection should conclude with at least one thoughtful question you have that was provoked by the readings. The assignment should be posted by noon on Sunday before each class. Each reading reflection should be maximum two paragraphs. We will discuss the questions in class. Additional participation points can be earned by posting comments to other students' Reading Reflections in the Discussions forum.

Once during the semester, you will take the role of a discussion leader. When it is your turn to do that, review the assigned reading carefully and distill the key points into one slide to guide the discussion. Using your own judgment and the reading reflections posted by your classmates, prepare a list of questions that will drive our conversation in class. It will be your responsibility to make the discussion informative, relevant, and engaging.

[You can sign up to lead a discussion topic here.](#)

## **2. Data Journey Plan**

Part 1 – Due before class 3, you will write a short Data Journey Plan. This should be no more than three (3) slides long. Details can be found in the **Detailed Course Overview** section below.

Part 2 – Before class 4, you will review and submit written feedback via email for two Data Journey Plans from your peers as assigned. Emails should be concise and contain concrete feedback for your peer to consider. You must copy the instructor on the email note containing feedback that you provide your two peers. You will spend a lot of your career providing managers, reports and peers with feedback on their ideas. This is your chance to practice this skill. The goal of your feedback is to be as helpful as possible.

Part 3 – Before class 5, you will provide written feedback via email to the two classmates that provided feedback on your Data Journey Plan. Emails should be concise and contain concrete feedback on the feedback your peers provided you regarding your Data Journey Plan. You must copy the instructor on the email note containing feedback that you provide your two peers. You will get practice internalizing and applying the feedback you receive. Closing the feedback loop and communicating with your peers is an important skill.

## **3. Data and AI Initiative Proposal**

Imagine you are part of a consulting team hired by a social impact organization to help jumpstart or accelerate its journey to AI. The organization is looking for an actionable game plan to leverage data and AI to drive impact while inspiring staff to engage in this initiative.

Following class 4, confirm the members of your small group (2-4 people) for the final team assignment and the social impact organization that will be your team's focus. As a group, you

will explore and recommend an AI use case with the best likelihood of success. You should build on one of your teammate’s Data Journey Plans.

The Proposal should be a maximum of 12 slides and will examine the topics addressed in this course. Additional Appendix materials should also include each team member’s full evaluation of an AI use case.

During our final class, each team will have a chance to present its Data and AI Initiative Proposal in person. Individuals should also provide a brief overview of the use case s/he evaluated.

After the final class, you will have a chance to update your proposal based on feedback received from your peers.

**Late Submission Policy for Assignments**

Extensions will be granted only in case of emergency, out of respect to those who abide by deadlines despite equally demanding schedules. Late submissions without extensions will be penalized 20% per 24-hour period.

**Detailed Course Overview**

<b>Class #</b>	<b>Topic</b>	<b>Assignments</b>	<b>Readings</b>
<b>1</b>	Introduce and Define	Personal Introduction Discussion Forum (ongoing)	<ul style="list-style-type: none"> <li>• AI Ladder</li> <li>• AI Primer</li> <li>• Field Guide, p.17-37</li> <li>• Trustworthy, ch. 1</li> <li>• UN Big Data, p.20-49</li> <li>• UN Primer</li> </ul>
<b>2</b>	Engage		<ul style="list-style-type: none"> <li>• Buolamwini video</li> <li>• Data Ethics Canvas</li> <li>• Scaling Pathways, p.1-7</li> <li>• Trustworthy, ch. 4, 15, 16 + Intros ch. 5, 10, 12, 13, 14</li> </ul>
<b>3</b>	Collect and Organize	Part 1 - Data Journey Plan	<ul style="list-style-type: none"> <li>• Scaling Pathways, p.8-20</li> <li>• Trustworthy, ch. 2</li> </ul>
<b>4</b>	Analyze	Part 2 - 2x Feedback Team Formation	<ul style="list-style-type: none"> <li>• Leap</li> <li>• McKinsey</li> <li>• NTEN</li> <li>• UN Big Data, p.50-70</li> </ul>

5	Manage and Infuse	Part 3 - 2x Feedback	<ul style="list-style-type: none"> <li>• AI-Powered</li> <li>• Scaling Pathways, p.21-38</li> <li>• UN Big Data, p.74-91</li> </ul>
6	Prioritize		<ul style="list-style-type: none"> <li>• Field Guide, p.38-45</li> <li>• Scaling Pathways, p.39-43</li> <li>• UN Big Data, p.92-107</li> </ul>
7	Synthesize	Data and AI Initiative Presentations	<ul style="list-style-type: none"> <li>• Scaling Pathways, p.44-47</li> <li>• UN Big Data, p.108-120</li> </ul>

## WEEK 1: INTRODUCE AND DEFINE – UNPACKING TERMINOLOGY AND OVERVIEW OF DATA JOURNEY TO AI

### Assignments

#### **(1) Personal Introduction (submit by 12pm on Sunday before Week 1)**

Please share the following in Brightspace:

- Preferred name
- Pronouns
- Where you work and/or sector of interest
- Current or aspiring role
- Your top value --- in life, work, relationships (3 values total)
- Statement on why you're taking this course, what you hope to gain, what you hope to contribute and what you are curious about
- Your current definition or understanding of Artificial Intelligence (AI)
- Anything else you'd like your colleagues/classmates to know about you

#### **(2) Reading Reflections and Discussion Lead (ongoing)**

- See “**Class Participation**” under **Assignment Instructions** above for specifics.

#### **(3) Required Readings**

- Booz Allen Hamilton, pages 17-37 from [The Field Guide to Data Science](#). 2015.
- [The Artificial Intelligence Primer: Distinguishing Hype from Reality in Our New Technological Era](#). Booz Allen, 2018.
- Thomas, Rob. [The AI Ladder: Demystifying AI Challenges](#). O'Reilly Media, 2019.
- UN Global Pulse, pages 20-49 from [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016.
- UN Global Pulse, [Big Data for Development: A Primer](#), 2013.
- Varshney, Kush R. Chapter 1 on *Establishing trust* from [Trustworthy Machine Learning](#). E-book, 2021.



## Suggested Readings

- Basker, Sian. Pages 6-13 from [Data Evolution Project Report](#). Data Orchard, 2017.
- DalleMule, Leandro and Davenport, Thomas. [What's Your Data Strategy?](#) Harvard Business Review, 2017.
- Julia Stoyanovich and Falaah Arif Khan. [We are AI Comics](#), Center for Responsible AI, 2021.
- Ladley, John and Redman, Thomas. [Use Data to Accelerate Your Business Strategy](#). Harvard Business Review, 2020.
- [The Number One Question That CEOs Ask Us](#). Polynumeral, 2016.
- Thomas, Rob and Zikopoulos, Paul. Chapters 1 and 2 from [The AI Ladder – Accelerate Your Journey to AI](#). O'Reilly Media, 2020.
- White, Andrew. [Design a Data and Analytics Strategy](#). Gartner, 2019.

## Introduce Assignment: Part 1 - Data Journey Plan (*submit by 12pm on Sunday before Class 3*)

Imagine you have been recently hired as Chief Strategy Officer for a social impact organization of your choosing. Select a social impact organization that you know well (e.g. one where you have worked, volunteered, etc.). If you do not have experience with a social impact organization, choose one that has substantial public content available online for you to review (e.g. publications, annual report, social media presence, informative website). A list of appropriate social impact organizations can be made available from the instructor as requested.

You just finished leading your first workshop named “Defining your Data Mission” with employees. You’ve gained the trust of a colleague whose input you value and you are preparing to ask that person to preview the slides you are creating to capture the Data Journey Plan before sharing it more broadly. Prepare a maximum of three (3) slides that clearly capture the following three (3) topics (Note: No more than 1 slide per topic; additional Appendix materials are permitted):

### SLIDE 1

Using the organization’s own vision and mission statement, develop ‘Data Vision’ and ‘Data Mission’ statements for this organization. <sup>1</sup>

The organization’s Data Vision is the “why”. A vision statement explains why an organization exists and ensures alignment around a common goal. The “Data Vision Statement” should support the organization’s overall vision and provide the “North Star” for an organization’s data strategy. Questions to guide the creation of a data vision:

- Why does the organization care about data?
- Why and in what ways does data support the organization?
- Is the statement inspiring and a true North Star for the organization’s data?
- Is it simple and easy to understand?
- Is it aligned to the organization’s vision statement?

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<sup>1</sup> Peters, Rich. How to Write Your Data Vision and Mission Statements. Oct 7, 2020.

The organization's Data Mission is the "what" and "how". A mission statement defines what an organization is going to accomplish and how it is going to accomplish it. The "Data Mission Statement" should support the organization's Data Vision Statement and ties into the organization's mission statement. It will serve as the starting point for an organization's data strategy. Questions to guide the creation of a data mission:

- What is the organization going to accomplish?
- How is the organization going to accomplish it?
- Does the statement encompass the data's relationship to the organization's vision and mission?
- Does it support all stakeholders in the organization?
- Is it clear how it can be implemented?
- Does it clarify which data is higher priority?
- Will it inspire leadership to devote resources in support of it?

## SLIDE 2

Using one of the four **Organizational Data Assessments** listed below, evaluate how data-savvy your social impact organization is to the best of your ability. Use the organization's website, publications and blogs, social media activity, LinkedIn, etc. to gauge how the organization is using data. Identify the most important areas for improvement including an initial set of ideas and next steps to address these improvement areas. Apply (or fill out as appropriate) one of the following *Organizational Data Assessments* and submit it with your slides.

Organizational Data Assessments:

- Basker, Sian. [Data Maturity Framework for the Not-for-Profit Sector](#). Data Orchard, 2019. (Note: Additional background on framework in the **Data Orchard** reading)
- Center for Data Science and Public Policy, University of Chicago. [Data Maturity Framework](#), 2018.
- Scaling Pathways "Using Data to Power Scale" [Data Checklist](#). Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020.
- The Data Innovation Project, [Data-Informed Self-Assessment Tool](#).

## SLIDE 3

Create a list of questions you would like to investigate further, people you would like to talk to, considerations about ethical data practices and additional research required to guide your organization to advance along its data journey. This is a chance for you to get supportive, helpful feedback on early-stage ideas so you should feel free to take some chances and be open about the weaknesses in your approach.

## WEEK 2: ENGAGE – DATA ETHICS, TRUSTWORTHY AI AND BEST PRACTICES FOR WORKING WITH DATA

### Assignment

#### (1) Required Readings & Media

- Buolamwini, Joy. [How I'm fighting bias in algorithms](#). TedxBeaconStreet, 2016.
- [Data Ethics Canvas](#) Tool. Open Data Institute.
- Varshney, Kush R. [Trustworthy Machine Learning](#). E-book, 2021
  - Chapter 4 on *Data sources and biases*
  - Chapter 15 on *Ethics principles*
  - Chapter 16 on *Lived experience*
  - Pages 57-59 from Chapter 5 on *Privacy and consent*
  - Pages 147-151 from Chapter 10 on *Fairness*
  - Pages 183-188 from Chapter 12 on *Interpretability and explainability*
  - Pages 209-213 from Chapter 13 on *Transparency*
  - Pages 229-233 from Chapter 14 on *Value alignment*
- Worsham, Erin, Langsam, Kimberly and Martin, Ellen. Pages 1-7 from [Using Data to Power Scale](#). Scaling Pathways, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020.

#### Suggested Readings & Media

- Benjamin, Ruha. [Race After Technology](#). Polity Press, 2019.
- Broad, Ellen, Smith, Amanda and Well, Peter. [Helping organisations navigate ethical concerns in their data practices](#). Open Data Institute, 2017.
- Kantayya, Shalini. Feature documentary [Coded Bias](#). 7th Empire Media, 2020.
- Kilbertus, Niki. [Can a Machine Learn Inclusivity? That Depends on the Teacher](#). Digital Impact.
- O'Neil, Cathy. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. New York: Crown Publishers, 2016.
- The Monitor Institute by Deloitte. Pages 35-47 from [Re-imagining measurement: A better future for monitoring, evaluation, and learning in the social sector](#), 2016.
- Thomas, Rob and Zikopoulos, Paul. Chapter 3 from [The AI Ladder – Accelerate Your Journey to AI](#). O'Reilly Media, 2020.
- UN Global Pulse. Pages 122-128 from [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016.

## WEEK 3: COLLECT AND ORGANIZE – THE VALUE OF INTERNAL AND EXTERNAL DATA SOURCES TO DRIVE IMPACT

### Assignments

**(1) Part 1 - Data Journey Plan** (*submit by 12pm on Sunday before Class 3*)

#### **(2) Required Readings**

- Varshney, Kush R. Chapter 2 on *Machine learning lifecycle* from [Trustworthy Machine Learning](#). E-book, 2021.
- Worsham, Erin, Langsam, Kimberly and Martin, Ellen. Pages 8-20 from [Using Data to Power Scale](#). Scaling Pathways, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020.

#### Suggested Readings & Media

- Basker, Sian. Pages 19-23 from [Data Evolution Project Report](#). Data Orchard, 2017.
- Thomas, Rob and Zikopoulos, Paul. Chapters 6 and 7 from [The AI Ladder – Accelerate Your Journey to AI](#). O'Reilly Media, 2020.
- Underwood, Hannah. [Data For Good](#).
- World Economic Forum. [Big Data, Big Impact: New Possibilities for International Development](#), 2012.

Introduce Assignment: Part 2 - Data Journey Plan Feedback (x2) (*submit by 12pm on Sunday before Class 4*)

You will be assigned two Data Journey Plans from your classmates for purposes of peer review. You must send two concise emails to each of your peers with the instructor on copy. In providing feedback, it is useful to start by summarizing your understanding of your colleagues' goals as clearly and succinctly as possible. Then, you can describe aspects you found valuable from the slides. Finally, you can make suggestions about how the slides can be improved; the more concrete and specific your suggestions the better. Providing thoughtful and actionable feedback is an important skill to practice and one you will use throughout your career.

## WEEK 4: ANALYZE – USE CASES AND APPROPRIATE APPLICATIONS OF AI FOR DEEPER INSIGHTS

### Assignments

**(1) Part 2 - Data Journey Plan Feedback (x2)** (*submit by 12pm on Sunday before Class 4*)

**(2) Team Formation for Data and AI Initiative Proposal** (*submit following Class 4*)

If you have not already done so, you should form small groups (3-4 people) for the final class project and [update the Google Doc](#) to include the organization name and a list of team members. As noted in the Assignment Instructions above, imagine you are part of a consulting team hired by a social impact organization to help jumpstart or accelerate its journey to AI. The organization is looking for an actionable game plan to leverage data and AI to drive impact while inspiring staff to engage in this initiative. Plan to build on one of your teammate's Data Journey Plans.

This assignment has three parts:

- A team presentation delivered during the final class. Each team will have a chance to present its Data and AI Initiative Proposal and individual team members should also provide a brief overview of the use case s/he evaluated.
- An individual component, where each team member evaluates an AI use case (to be included in the Appendix of the team deck).
- A final team proposal culminating in a PowerPoint Presentation containing no more than 12 slides (plus individual use cases in Appendix).

**(3) Bonus: Take KindQ Questionnaire from [Summery.ai](#) (by April 17)**

#### **(4) Required Readings**

- Fine, Allison and Kanter, Beth. [Nonprofits and Artificial Intelligence - A Guide](#). Nten. 2020.
- IBM Institute for Business Value, [Leap before you lag: Nonprofits with deeper data capabilities see stronger impact, transparency and decisions](#), 2017.
- McKinsey Global Institute, [Applying artificial intelligence for social good](#), 2018.
- UN Global Pulse. Pages 50-70 from [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016.

#### Suggested Readings

- Google, [Accelerating social good with artificial intelligence: Insights from the Google AI Impact Challenge](#), 2019.
- [NYC AI Primer](#), NYC.gov, 2021.
- PwrDBy, [The State of AI in the Nonprofit Sector](#), 2020.
- Salesforce.org Nonprofit Cloud, [AI for Good Nonprofit Trends & Use Cases](#), 2019.
- Thomas, Rob and Zikopoulos, Paul. Chapter 8 from [The AI Ladder – Accelerate Your Journey to AI](#). O'Reilly Media, 2020.

Introduce Assignment: Part 3 - Data Journey Plan “Feedback on the Feedback” (x2) (*submit by 12pm on Sunday before Class 5*)

In order to help you learn more about how to give and receive feedback, you must send two concise reply emails to each of your peers who provided you feedback on your Data Journey Plan with the instructor on copy. Highlight which parts you found most helpful and what changes you plan to make based on the feedback.

Introduce Assignment: Data and AI Initiative Presentation (*Team presentations in class and Proposals due on Monday following Class 7*)

The Proposal should be a maximum of 12 slides and will examine the topics addressed in this course. Additional Appendix materials should also include each team member's full evaluation of an AI use case. Your presentation and submission must include the following:

- 1) The chosen social impact organization's data vision and mission.
- 2) Synthesis of the organization's data maturity using at least one of the assessment tools introduced in Class 3 – identify growth opportunities, areas for improvement and flag the tools and skills needed to take your organization's data journey to the next level.
- 3) An analysis of several AI use cases (one per student; this is the individual component of the team assignment). Include an overview of the ethical data considerations when pursuing each use case. **Each team member should evaluate one idea / use case and complete a corresponding [Data Ethics Canvas](#), which will be included in the Appendix along with the team submission.**
- 4) The team should recommend one AI use case that would contribute to the organization's mission while considering the organization's maturity. Develop a framework for selecting the prioritized use case along with the rationale. Detail the following key considerations:
  - i. Clearly outline how the proposed use case supports the organization's data vision and mission;
  - ii. Detail why the other use cases were not selected;
  - iii. Document the existing and potential new data sources that can be utilized (internal and external);
  - iv. Highlight ethical considerations, inclusive data practices and potential limitations;
  - v. Specify data collection methods including the instruments that will be used to collect the data (e.g. survey, focus group interviews, public data sources, internal database or combination);
  - vi. Decide which type of analysis is appropriate (e.g. descriptive, predictive);
  - vii. Call out whether the organization has access to the required skills or needs to secure new resources;
  - viii. Identify other supports needed to make this initiative a success (volunteers, partnerships, funder, etc.); and
  - ix. Recommend how this use case ultimately can be infused into the organization's operations (e.g. automated/embedded into a workflow, built into a dashboard, etc.).
- 5) Develop a 30-day plan to gather more input from internal and external stakeholders. Who does your team need to meet with? What are the open questions, areas that require deeper investigation or attention, and critical decision points that need to be answered to advance the data and AI initiative?

6) Think through a staff engagement plan and draft an email to get staff excited about this initiative. Give them an idea overview what they can expect over the next 6 months and a call to action about how to engage in the process.

Each team will have a chance to present its Data and AI Initiative Proposal in person. Imagine this is the final readout from your consulting engagement to the leadership of the organization. Present a synthesis of your findings and clear recommendation. Ensure the leadership team is comfortable with your Proposal and feels empowered to act on the plan. The class will take on the role of the leadership team to ask clarifying questions and provide feedback. As a class, we will spend time discussing how the Proposal can be improved. A final version of the Proposal will be due on the Monday following the last class.

## WEEK 5: MANAGE AND INFUSE – PRACTICES AND SYSTEMS TO SUSTAIN THE ADVANCED USE OF DATA AND AI THROUGHOUT THE ORGANIZATION

### Assignments

**(1) Part 3 - Data Journey Plan “Feedback on the Feedback” (x2) (submit by 12pm on Sunday before Class 5)**

### **(2) Required Readings**

- Fountaine, Tim, McCarthy, Brian and Saleh, Tamim. [Building the AI-Powered Organization - Technology isn't the biggest challenge. Culture is.](#) Harvard Business Review, 2019.
- UN Global Pulse. Pages 74-91 from [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016.
- Worsham, Erin, Langsam, Kimberly and Martin, Ellen. Pages 21-38 from [Using Data to Power Scale](#). Scaling Pathways, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020.

### Suggested Readings & Media

- Anderson, Carl. [Creating a Data-Driven Organization: Practical Advice from the Trenches](#). O'Reilly Media, 2015.
- Basker, Sian. [How to become a data-savvy leader](#). #Bemoredigital Charity Digital Leadership conference, 2020.
- Idealware. [Unleashing Innovation: Using Everyday Technology to Improve Nonprofit Services](#), 2012
- Patil, DJ and Mason, Hilary. [Data Driven – Creating a Data Culture](#). O'Reilly Media, 2015.
- Rank, Rachel. [What Does It Take to Be a Data Champion?](#) Digital Impact.
- Technology Association of Grantmakers. [Roadmap for Funders: Investing in Digital Infrastructure](#), 2020.
- Thomas, Rob and Zikopoulos, Paul. Chapters 4, 9 and 10 from [The AI Ladder – Accelerate Your Journey to AI](#). O'Reilly Media, 2020.

## WEEK 6: PRIORITIZE – TECHNOLOGY, CAPABILITIES AND TALENT TO CATALYZE THE ORGANIZATION’S DATA JOURNEY

### Assignment

#### **(1) Required Readings**

- Booz Allen Hamilton. Pages 38-45 from [The Field Guide to Data Science](#). 2015.
- UN Global Pulse. Pages 92-107 from [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016.
- Worsham, Erin, Langsam, Kimberly and Martin, Ellen. Pages 39-43 from [Using Data to Power Scale](#). Scaling Pathways, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020.

#### Suggested Readings & Media

- Guzman, Laura. [When Choosing Digital Tools, Consider Context](#). Digital Impact.
- Thomas, Rob and Zikopoulos, Paul. Chapter 5 and 11 from [The AI Ladder – Accelerate Your Journey to AI](#). O’Reilly Media, 2020.

## WEEK 7: SYNTHESIZE - TIE IT ALL TOGETHER

### Assignments

**(1) Data and AI Initiative Presentation** (*Team presentations in class and Proposals due on Monday following Class 7*)

#### **(2) Required Readings**

- UN Global Pulse. Pages 108-120 from [Integrating Big Data into the Monitoring and Evaluation of Development Programmes](#), 2016.
- Worsham, Erin, Langsam, Kimberly and Martin, Ellen. Pages 44-47 from [Using Data to Power Scale](#). Scaling Pathways, Innovation Investment Alliance, Skoll Foundation, and CASE at Duke, 2020.

#### Suggested Readings & Media

- [Co-Opting AI: Conversations About Design, Inequality, and Technology](#). Institute for Public Knowledge, New York University, 2019.
- Varshney, Kush R., Mojsilovic, Aleksandra, [Open Platforms for Artificial Intelligence for Social Good: Common Patterns as a Pathway to True Impact](#). 2019.



## NYU Brightspace

All announcements, resources, and assignments will be delivered through the NYU Brightspace site. I may modify assignments, due dates, and other aspects of the course as we go through the term with advance notice provided as soon as possible through the course website.

## Letter Grades

Letter grades for the entire course will be assigned as follows:

Letter Grade	Course Points	GPA Points	Criteria
A	> 93.0	4.0	<b>Excellent:</b> Exceptional work for a graduate student. Work at this level is unusually thorough, well-reasoned, creative, methodologically sophisticated, and well written. Work is of exceptional, professional quality.
A-	> 90.0	3.7	<b>Very good:</b> Very strong work for a graduate student. Work at this level shows signs of creativity, is thorough and well-reasoned, indicates strong understanding of appropriate methodological or analytical approaches, and meets professional standards.
B+	> 87.0	3.3	<b>Good:</b> Sound work for a graduate student; well-reasoned and thorough, methodologically sound. This is the graduate student grade that indicates the student has fully accomplished the basic objectives of the course.
B	> 83.0	3.0	<b>Adequate:</b> Competent work for a graduate student even though some weaknesses are evident. Demonstrates competency in the key course objectives but shows some indication that understanding of some important issues is less than complete. Methodological or analytical approaches used are adequate but student has not been thorough or has shown other weaknesses or limitations.
B-	> 80.0	2.7	<b>Borderline:</b> Weak work for a graduate student; meets the minimal expectations for a graduate student in the course. Understanding of salient issues is somewhat incomplete. Methodological or analytical work performed in the course is minimally adequate. Overall performance, if consistent in graduate courses, would not suffice to sustain graduate status in “good standing.”

<b>C+</b>	> 77.0	2.3	<b>Deficient:</b> Inadequate work for a graduate student; does not meet the minimal expectations for a graduate student in the course. Work is inadequately developed or flawed by numerous errors and misunderstanding of important issues. Methodological or analytical work performed is weak and fails to demonstrate knowledge or technical competence expected of graduate students.
<b>C</b>	> 73.0	2.0	
<b>C-</b>	> 70.0	1.7	
<b>F</b>	< 70.0	0.0	<b>Fail:</b> Work fails to meet even minimal expectations for course credit for a graduate student. Performance has been consistently weak in methodology and understanding, with serious limits in many areas. Weaknesses or limits are pervasive.

## Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by [Wagner’s Academic Code](#). All Wagner students have already read and signed the [Wagner Academic Oath](#). Plagiarism of any form will not be tolerated and students in this class are expected to report violations to me. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult with me.

## Henry and Lucy Moses Center for Student Accessibility

Academic accommodations are available for students with disabilities. Please visit the [Moses Center for Students with Disabilities \(CSD\) website](#) and click the “Get Started” button. You can also call or email CSD (212-998-4980 or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu)) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

## NYU’s Calendar Policy on Religious Holidays

[NYU’s Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.

## NYU’s Wellness Exchange

[NYU’s Wellness Exchange](#) has extensive student health and mental health resources. A private hotline (212-443-9999) is available 24/7 that connects students with a professional who can help them address day-to-day challenges as well as other health-related concerns.

## **Class Policies**

### **Emails:**

I will generally answer emails within 48 hours of receipt, but not on weekends. Questions regarding projects will be answered only if they relate to those sections for which progress milestones have not passed.

### **Incompletes and Withdrawals:**

Note Wagner's [incomplete policy](#) and [course withdrawal policy](#).

### **Participation:**

As active participation is an important element of your grade so is attendance. Please notify me by email prior to any class in which you will be absent or late.

### **Group Work:**

Final projects will involve group work. You are expected to work cooperatively in such groups and to be an individual contributor to the group process. Group dynamics will be observed and will also contribute to the class participation portion of your grade.

### **Technology:**

I request that you do not use laptops, tablets or phones while in class. Please bring notebooks for taking notes. Slides will also be made available in Brightspace and your fellow classmates will be sharing slides containing a summary of the readings. It is rare we get a break from our screens. My hope is that you are fully present and will actively participate during the class discussion each week.