Leadership of Responsible AI

Representation Matters

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Agenda

The Path to Leadership of Responsible AI (RAI)

- *AI Bias – Society, Academia, Government*
- *Industry response to RAI*

Leadership of Responsible AI – Doctoral Research

- *Research Question*
- *Literature Review/Map*
- *Working Definitions*
- *Proposed Research Method – Representation Matters*
- *Research Experiment*

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paravision®

The Path to Leadership of Responsible AI

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The Path to Leadership of Responsible AI

Transparency

Oversight

Accountability

Equity

- POSTME was a community coalition formed in Minneapolis, MN to champion accountability and to promote shared decision making in technology used to govern society.
- Believed residents should play a significant, meaningful role in deciding if and how surveillance technologies are funded, acquired, or used.

POSTME

Public Oversight of Surveillance Technology & Military Equipment

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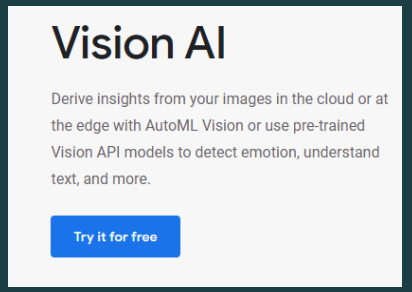

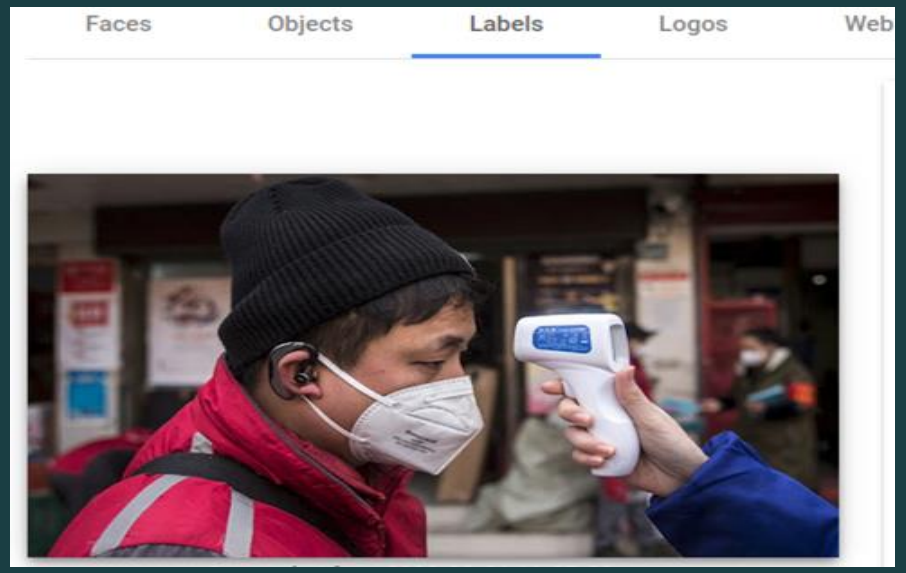

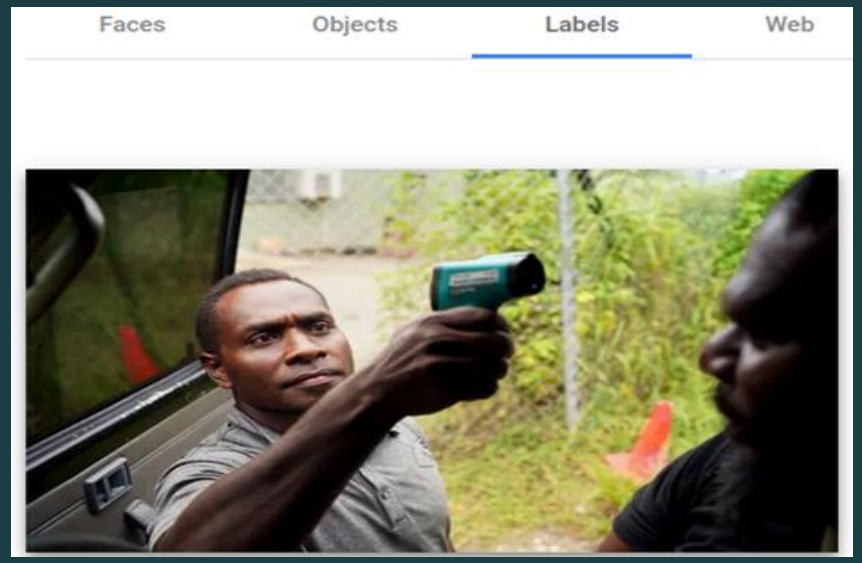

Created by Emun Solomon for POSTME

Technology	68%
Electronic Device	66%
Photography	62%
Mobile Phone	54%

Gun	88%
Photography	68%
Firearm	65%
Plant	59%

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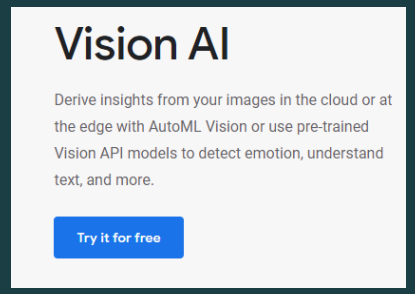
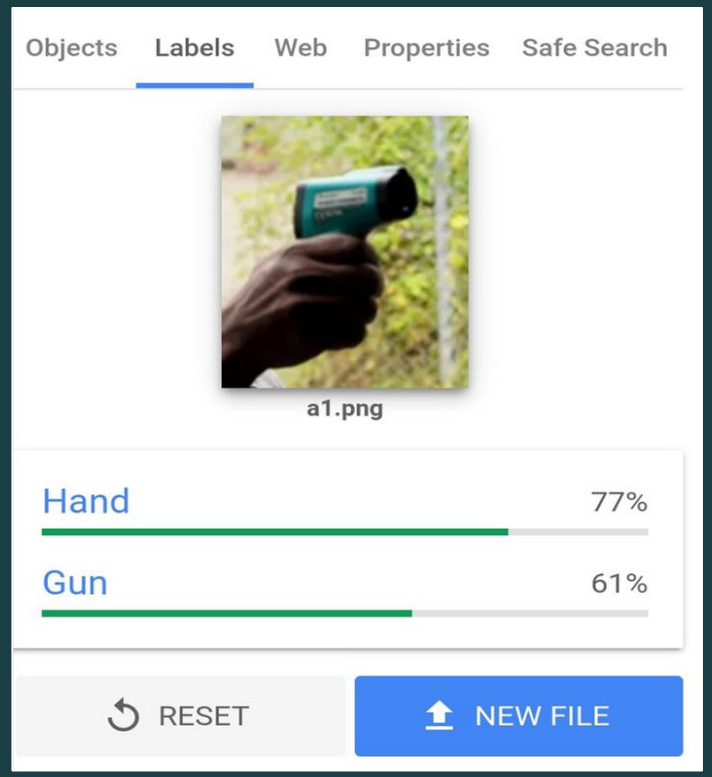
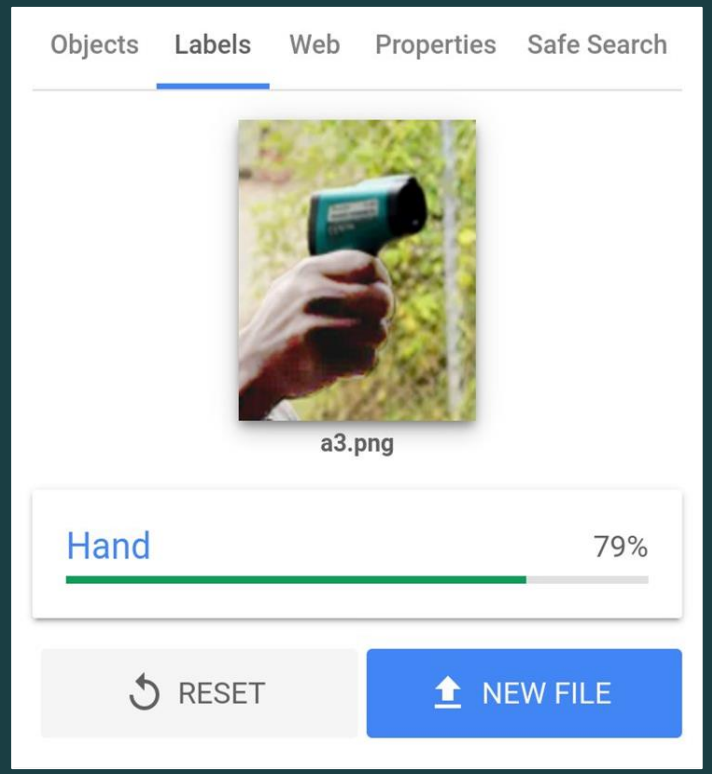
The Path to Leadership of Responsible AI







The exposure to the dark side of technology and harm specifically for people of color exists in multiple ways, as an individual member in society, as a member of an impacted community group, and as an employee (Tarafdar et al., 2013, Gupta et al., 2021).

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The Path to Leadership of Responsible AI

Technology Development

AI and hiring bias: Why you need to teach your robots well

Healthy human skepticism is part of smart AI design.

Economy

Biased AI systems contributing to $17bn gender credit gap in emerging markets: Study

How Algorithmic Bias Hurts People With Disabilities

How Stanford's vaccine algorithm caused a major controversy and left frontline workers at the back of the line

Minneapolis City Council votes to ban facial recognition technology

The city said council members heard from numerous residents concerned about privacy and accuracy.

When Governments Step

Remote testing monitored by AI is failing the students forced to undergo it

While automated proctoring might seem like a panacea in this age of virtual schooling, it's a terrible solution for millions of students.

Tech policy / AI Ethics

AI is sending people to jail—and getting it wrong

Using historical data to train risk assessment tools could mean that machines are copying the mistakes of the past.

What Society Experiences

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Technology Development

People and employees impacted by AI bias are rarely represented in the development of AI technology and given AI's ability to perpetuate society's injustices based on race, gender, and sexual orientation, there are legitimate reasons to be concerned about AI misuse (Agerfalk 2020, p.5, Akter et al., 2021).

These robots were trained on AI. They became racist and sexist.

As billions flow into robotics, researchers who conducted the study are concerned about the effects this might have on society

By Pranshu Verma

July 16, 2022 at 6:00 a.m. EDT

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The Path to Leadership of Responsible AI

Dr. Joy Buolamwini

Dr. Timnit Gebru

Leadership of Responsible AI

Representation Matters

Doctoral Research

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Research Question

How does the participation of African American Employee Stakeholders in the creation of RAI "shaping artifacts" reduce AI bias?

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Literature Review

How does the participation of African American Employee Stakeholders in the creation of RAI "shaping artifacts" reduce AI bias?		
Responsible Artificial Intelligence	• AI Bias and Impacts • AI Ethics, Principles • Organizational Learning & Development • Shaping Artifacts	Agerfalk (2020), Cheuk (2021), Fjeld et al. (2020), Jackson et al. (2021), Mayer et al. (2020), Selter et al. (2022), Seppala et al. (2020), Whittlestone et al. (2019)
Systems Design & Development	• Responsible Research & Innovation • Design Science Research • IS Design & Development • Organizational Learning & Development	Agerfalk et al. (2021), Bailey and Barley (2020), Gregor (2006), Lee et al. (2015), Livari (2017), McCarthy et al. (2020), Myers (2021), Teodorescu et al. (2021)

Employee Stakeholder Participation	• Stakeholder Theory
	  • Salience & Identification
	  • Participation in Innovation
	• Gap – African American Participation
		Freeman (1984), Freeman et al. (2004), Freeman et al. (2010), Laplume et al. (2008), McCarthy et al. (2020), Mitchell et al. (1997).

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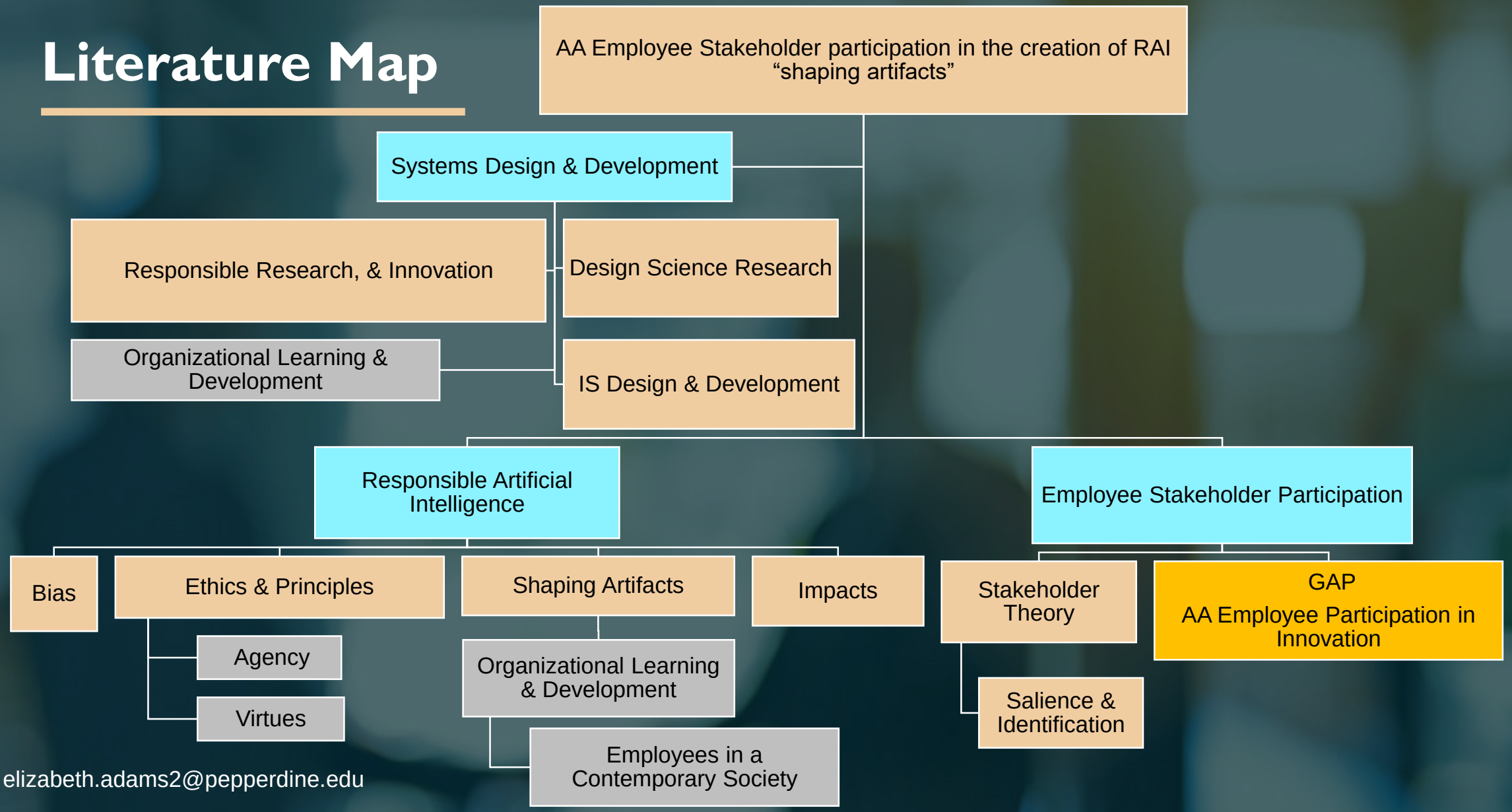
Literature Map



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Working Definitions

Information System (IS):

- a system that assembles, stores, processes, and delivers information relevant to an organization (or society) in such a way that the information is accessible and valuable to those who wish to use it (Buckingham, Hirschheim, Land, and Tully (1987, p. 18), as cited by Avison and Myers (1995)
- Information systems are "complex organizations of hardware, software, procedures, data, and people, developed to address tasks faced by individuals and groups, typically within some organizational setting" (March & Smith, 1995, p. 252).

Information System (IS) Artifact:

- comprises an IT artifact, an information artifact, a design science artifact, and a social artifact (De Leoz and Petter (2018), Lee et al., 2015)
- includes motivations associated with design science (Livari, 2017)

How does the participation of African American Employee Stakeholders in the creation of RAI "shaping artifacts" reduce AI bias?

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Working Definitions

Stakeholder Theory (SKT):

- SKT is a school of thought about capitalism that emphasizes the interwoven connections between businesses and their customers, suppliers, employees, investors, communities, and other stakeholders (Freeman et al., 2004).

Responsible AI (RAI) "Shaping Artifacts":

- represent outcomes of AI applications, and systems, designed, developed and implemented with scientific, ethical, principled, and legal foundations - ***as substructures for AI agency*** (Adams, 2022)

How does the participation of African American Employee Stakeholders in the creation of RAI "shaping artifacts" reduce AI bias?

Proposed Research Method - Qualitative

Requirements & Data Collection - **Human Subjects**:

- Semi-structured interviews and focus groups
- Identify as African American
- Based in the US
- Work for or consult with a company that has
  - Implemented RAI for internal or external purposes
  - Designed or developed RAI for internal or external purposes
- Company headquartered in U.S.

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Research Experiment
How does knowing about artificial intelligence bias make you feel?

"Um, it's a bit scary. Um, I mean, there are so many challenges that I as a woman of color already experience due to human based bias every single day ..."

"It doesn't feel great because I know that AI could be so much more. Bias didn't have to become baked in if we understood in the first place that humans are complex and can exist in multiple dimensions. We are more than binary classifications..."

"Well, I think it makes me I won't say angry, it makes me upset. I'm a very, I'm a dark complected black male..."

"It makes me feel unseen. Knowing that the technology is excluding people who look like me. It makes you feel almost invisible, that you're fighting for the right to be seen. And I don't want to feel that way..."

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Can you share an example of artificial intelligence bias that you have experienced?

"As an example, our technology uses sentiment, emotion, and context. Well, if the data set is not accurate on the expressions of African Americans, Native Americans, Latinos, we could potentially be forecasting negative emotions based on the lack of the data set..."

"The iPhone camera shots. I have to be in impeccable lighting to get the same quality of photos that my Caucasian counterparts get from, you know, I don't know basic lighting..."

"The facial recognition systems that some companies here are working on, still do not understand the complexities of our skin color, and melanin, and the interactions of how Black people are treated differently in the system..."

"One form of bias that has happened to me in particular, was related to a conference, and they wanted a photo. When I uploaded my photo, it said that no human was recognized and so I had to continually kind of manipulate the photo in order for it to be accepted..."

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If you were included in creating RAI artifacts, what contributions do you believe you could make?

"I bring a diversity of thought to the conversation of okay, why are we doing this? How are we doing it? What's it going to affect? Now let me tell you from my experience, what this looks like versus what your concept or your perception is..."

"Create an OKR (objectives, & key results) around improving lives to help more people want to use AI Ethics ..."

"I think from assessing their data sets, being able to advise and identify a potentially missing component within their business that maybe they may not have considered including in their training data. I think that's where I can add value..."

"I believe my biggest contribution will be from an application perspective, less conceptual and really about what I've seen and experienced, as I've led teams as large as 100 people..."

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If you were to read a headline about your organization in a major newspaper, and its response to Responsible AI, what would you want it to say?

"Transformation has come to America..."

"We have engaged our clients; we have listened to what our stakeholders have to say so that we can give citizens an understanding that we are trying make your lives better..."

"My company, shares their standards and processes and publicizes them for others around the world to use so that we can all do better..."

"I want it to say that our organization is a trailblazer in the future of work using AI responsibly..."

"We drive social change, and our impact will change for generations to come with the use of Responsible AI..."

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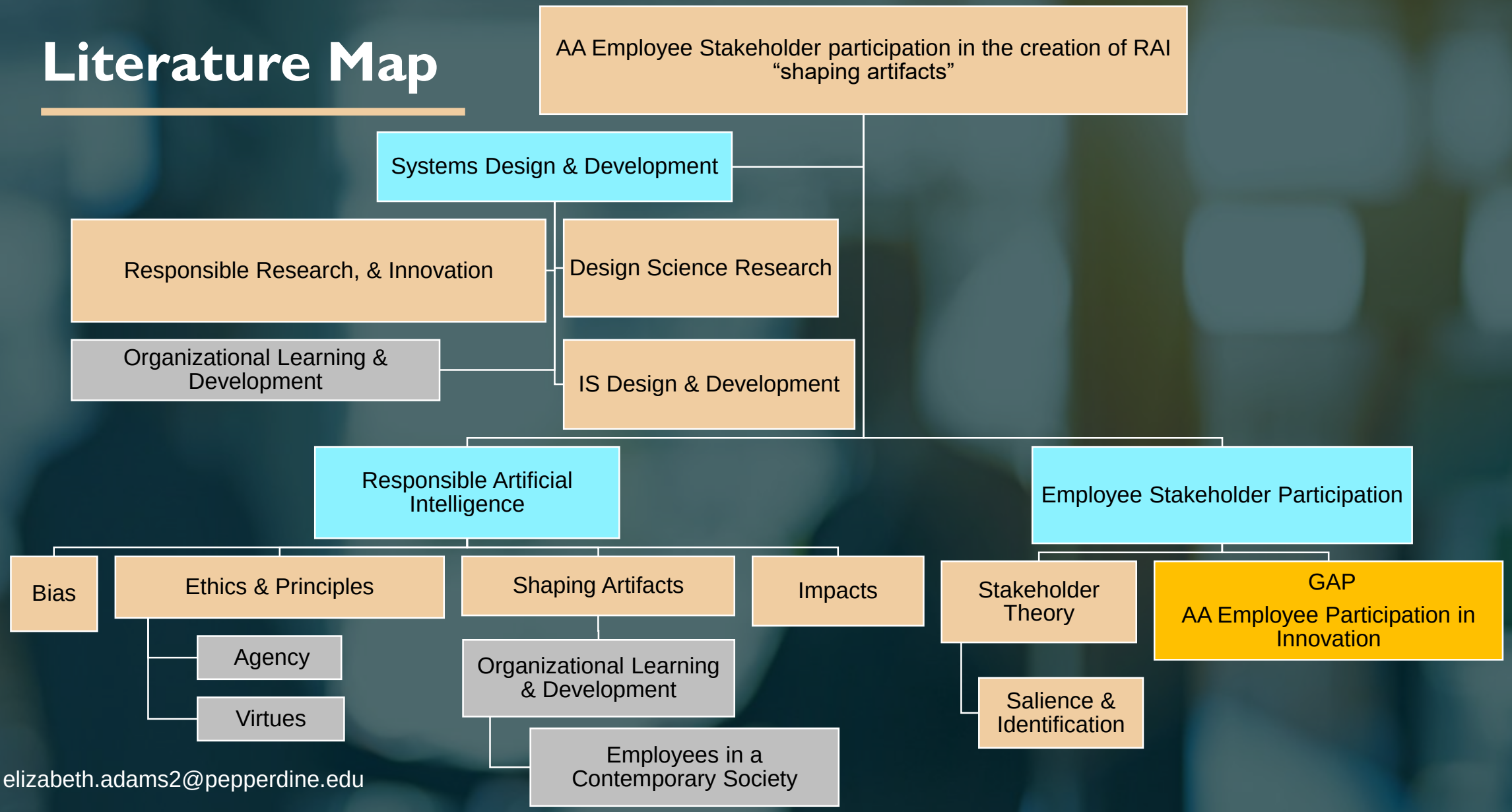
Literature Map



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