



RESEARCH PROPOSAL:

Exploring Ethical Considerations:

Generative AI's Impact on Current & Future HR Practices

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*Under the Supervision of **Dr. Gus Skorborg***

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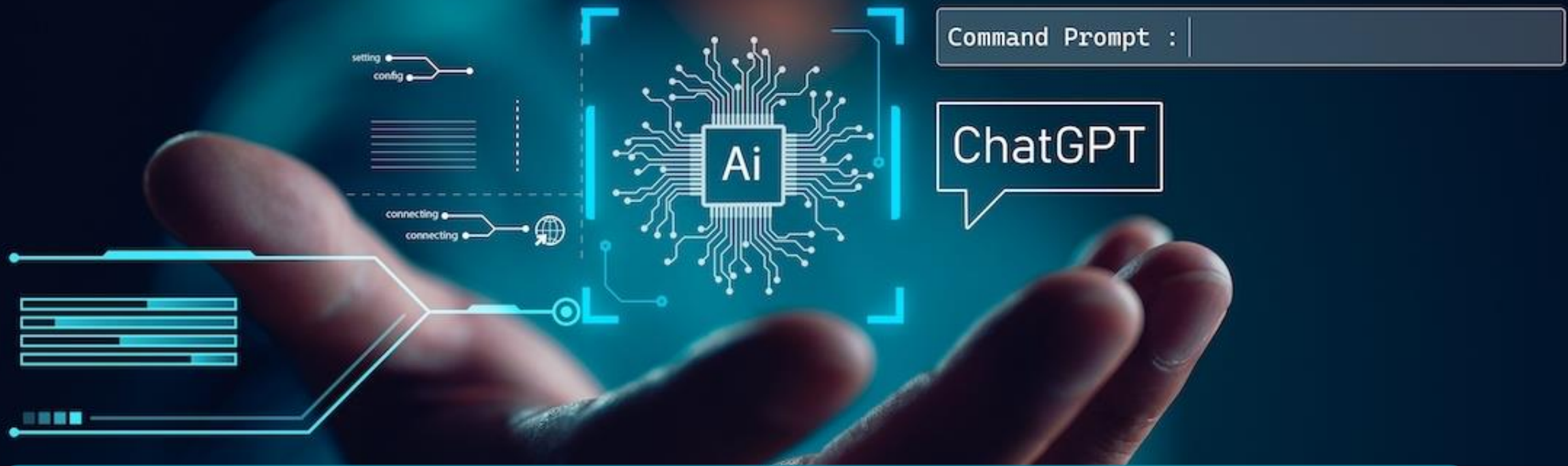


Introduction: Context



Artificial Intelligence (AI) has been revolutionizing and reinventing “normal” Human Resource (HR) practices ⁽³⁾.

- Organizations may seek to make use of AI-assisted technologies within their everyday HR practices due to the promise of **broader candidate pools, reduced recruitment costs, and potentially minimized human bias** ^(1,2).
- However, alongside these benefits, there have been many ethical concerns related to **discrimination, privacy, explainability, and accountability** tied to this usage ^(1,4).



The recent technological advancements of Generative AI systems have the potential to **transform & manipulate** this landscape even further.



You

How does ChatGPT work?



ChatGPT

ChatGPT is a language model developed by OpenAI based on the GPT (Generative Pre-trained Transformer) architecture. Here's a simplified explanation of how ChatGPT works:

1. Training Data:

- ChatGPT is trained on a diverse and extensive dataset that includes parts of the internet, books, articles, and other text sources. The model learns the patterns, structures, and nuances of human language from this data.

2. Architecture:

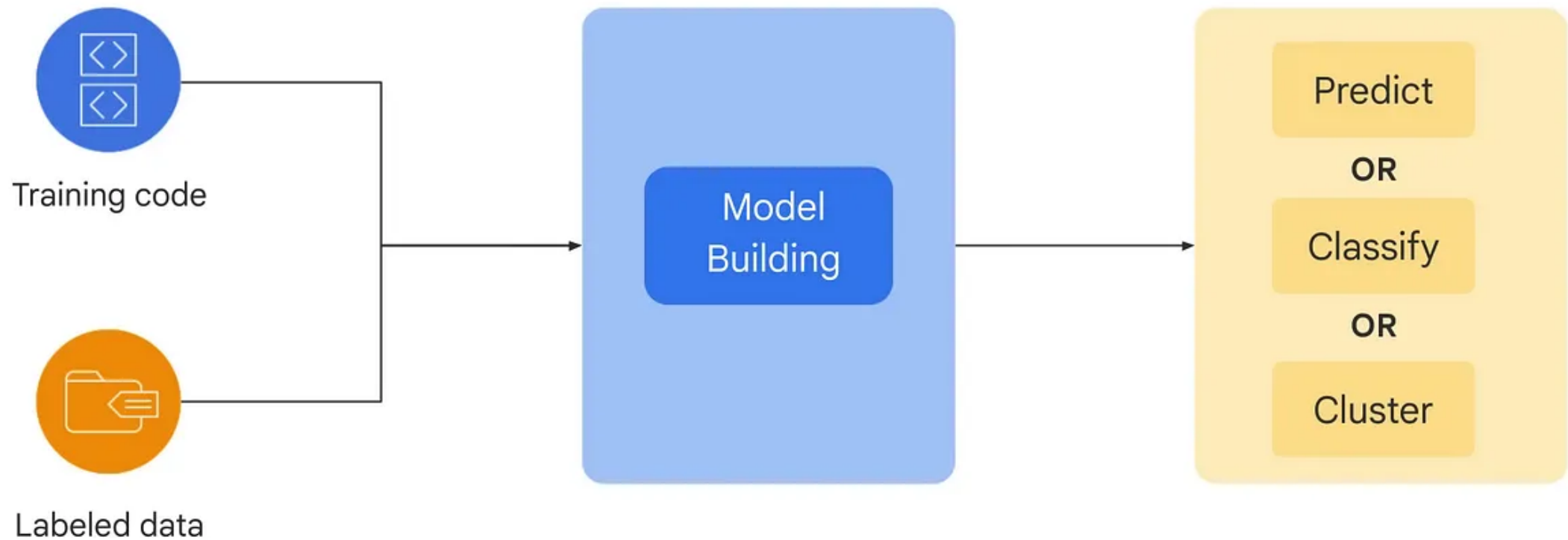
- ChatGPT uses a transformer architecture, specifically the GPT-3.5 architecture in this case. Transformers are a type of neural network architecture that has proven effective in natural language processing tasks.

3. Pre-training:

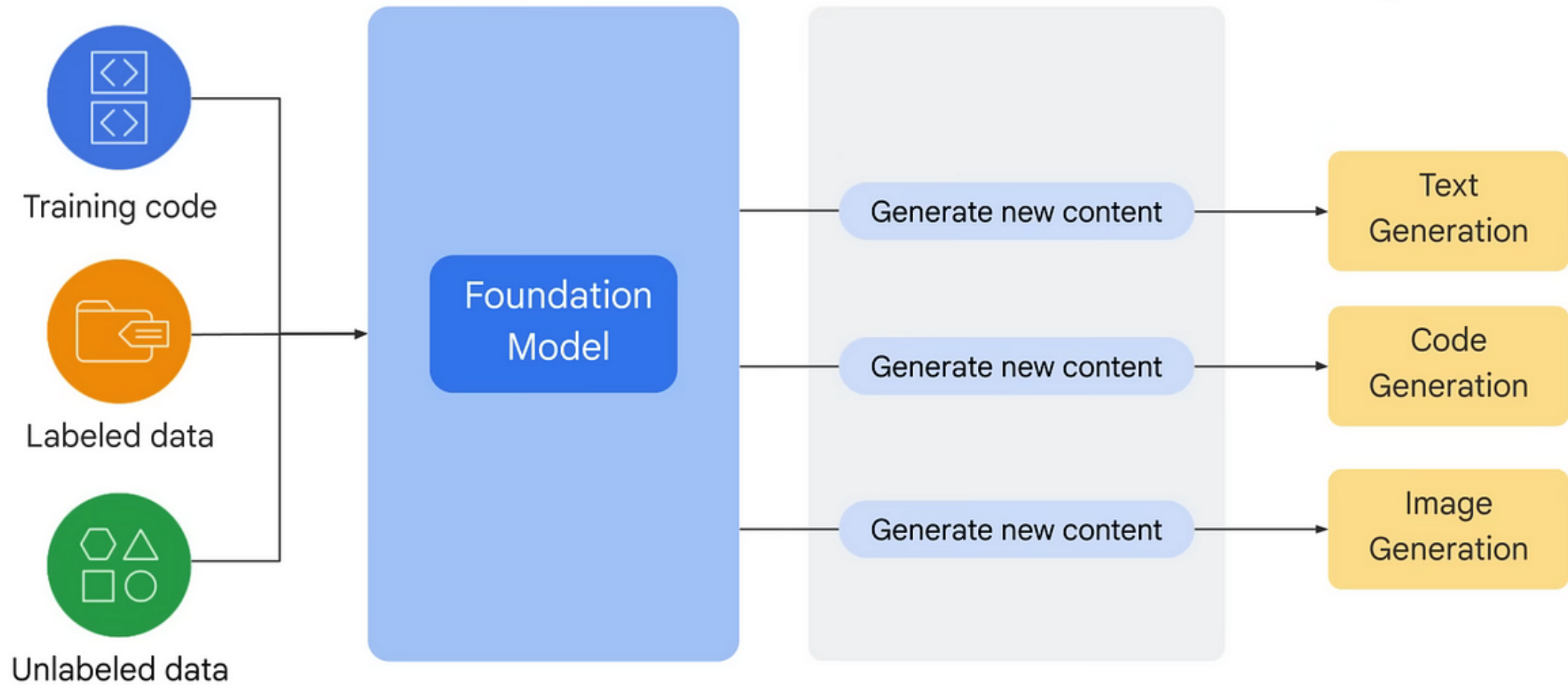
- Before being fine-tuned for specific tasks, ChatGPT goes through a pre-training phase. During pre-training, the model learns to predict the next word in a sentence based on the context of the words that came before it. This process helps the model develop an understanding of grammar, syntax, and contextual relationships.

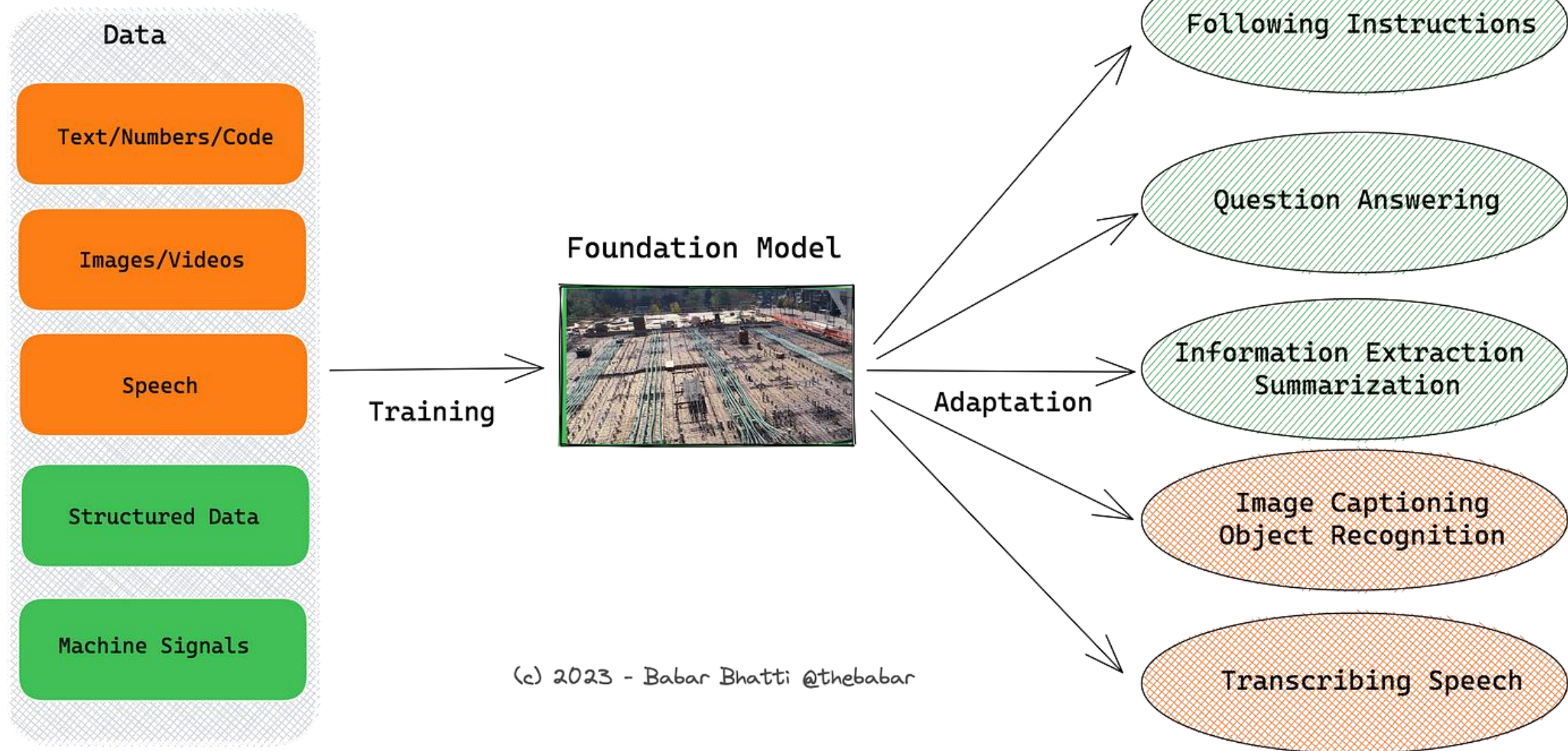
4. Fine-tuning:

Classical Supervised & Unsupervised Learning



Gen AI Supervised, Semi-Supervised & Unsupervised Learning





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The Current Study

Most existing literature focusing on AI adoption within HR practices fails to address **Generative AI's impact** on these practices ⁽¹⁾.

The literature that *does* address Generative AI in HR, does not address how **trustworthiness perceptions** of these technologies should influence our development and deployment of these systems in HR contexts ⁽²⁾.

This study seeks to address both critical gaps in literature, via a narrative literature review of existing research and a synthesis of key findings, to inform **future guidelines, frameworks, and policies**.



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Research Gap & Problems



Photo by Tara Winstead, Pexels 2023

What is Unknown?

- Lack of research surrounding the use of GAI applications in Human Resources contexts.
- Lack of research-backed frameworks, guidelines, and policies to ensure the fair application of GAI in HR contexts.

Justification For This Project:

- Principles of **Human Rights** ^(1,2)
- Principles of **Distributive Justice** ⁽³⁾
- HRM decisions have **profound impacts** on the livelihood of individuals.
 - The ethical concerns re: the use of this technology make it *our moral duty* to ensure it is deployed fairly.



In what ways can people's **perceptions of trustworthiness** of GAI systems be effectively integrated into GAI tool usage & development to mitigate potential adverse impacts on Human Resource Management processes?

Photo by Markus Spiske, Pexels, 2023

Aim & Objectives



The aim of this study is to synthesize the existing research of **perceptions of trustworthiness in AI** and deduce that into **practical suggestions** for people building and making use of GAI tools for HR professionals.

OBJECTIVE

1

To analyze & discuss the current scope of the technology in use, as well as their accompanying ethical, legal, and societal implications.

OBJECTIVE

2

To examine the psychological factors that facilitate the sense of trustworthiness in AI & GAI system interactions.

OBJECTIVE

3

To contribute to the development of an ethics-based framework that reduces potential bias and harm in GAI-driven HR processes.

Literature Review

- The accuracy of predictive models is tied to the **amount** and **variety** of training data they receive ⁽¹⁾.
- **Biased training data** in Generative AI may unintentionally worsen existing socio-economic disparities, posing for future potential harm to those in minority groups ^(1,3).
- Instances of perceived moral violations by AI result in blame being attributed to **the AI itself, its developers, and the organizations employing such AI** ^(1,2).

GAI Usage in HR

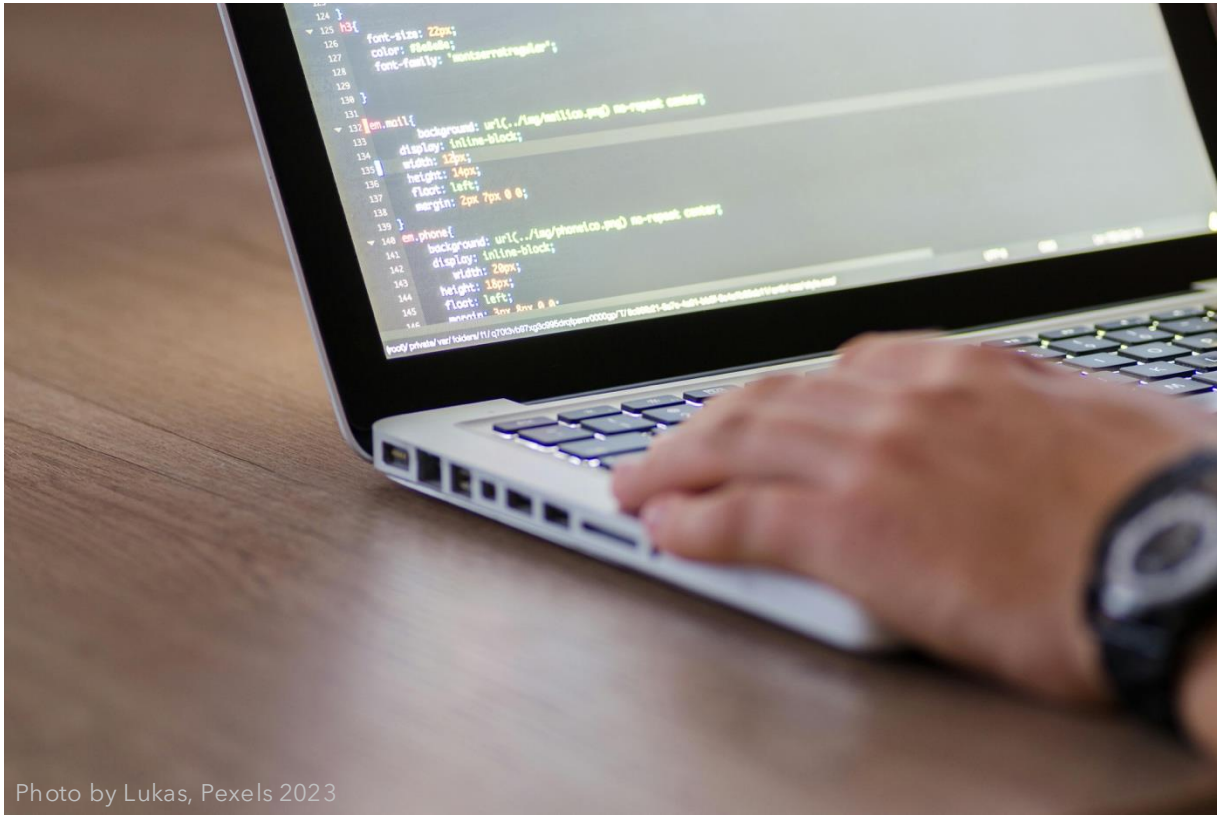
Streamlining recruitment processes via resumé screening.

Rapid reverse assessment between job postings & candidates.

Exploration of applicant social media profiles and UGC.

Operational 24/7, unlike human employees.

Automates laborious tasks (and frees up time for newly imagined ones).



Meta-Ethnography

Narrative Literature Review

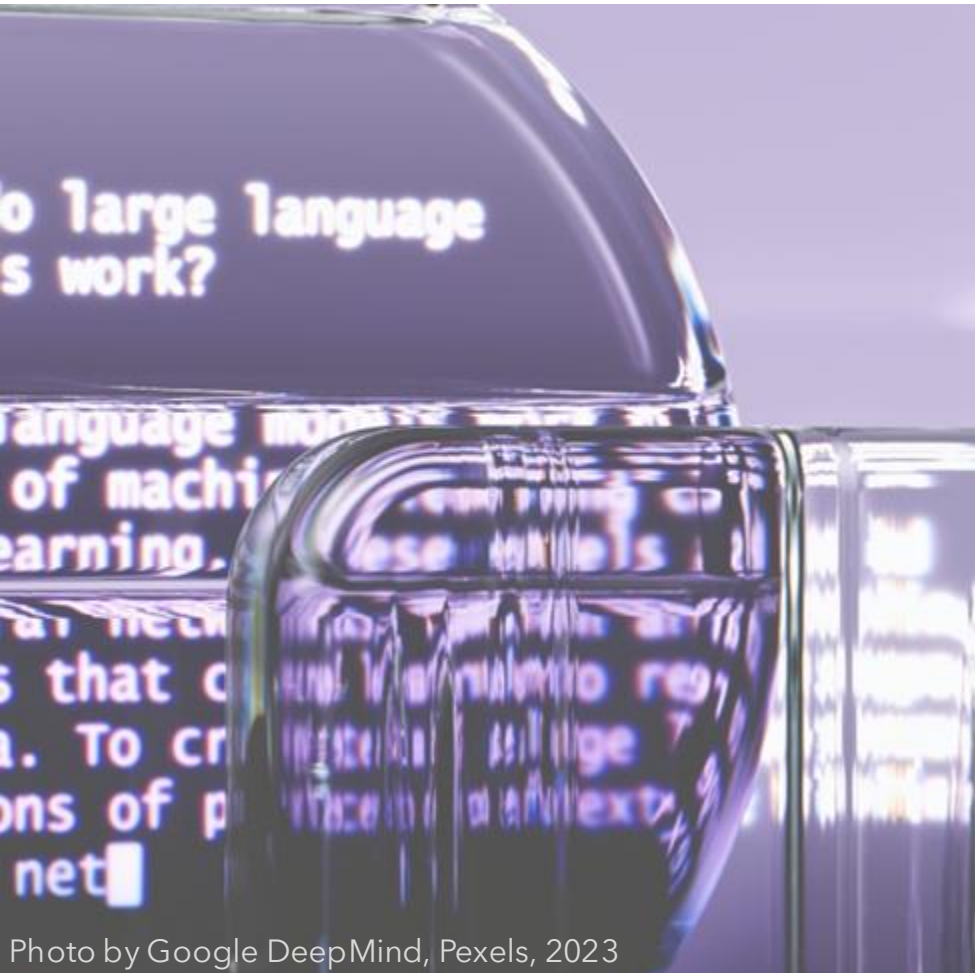
Synthesis of Key Findings

Proposed Methodology & Analyses



Proposed Methodology & Analyses

This proposed methodology is inspired by that of Hunkenschroer and Luetge's work, "*Ethics of AI-Enabled Recruiting and Selection: A Review and Research Agenda*" (2022).



Meta-Ethnographic Approach (Noblit, 2019):

- Serves as a **guiding framework** for the synthesis of qualitative/quantitative studies.
- Identifies and reviews studies related to a specific phenomenon.
- Systematic examination leads to **reduction** and **refined specification** of relevant studies.

One of the defining features of meta-ethnography is that of **theory generating** and **pinpointing avenues** for future research ⁽³⁾.

```
has_many :photos, dependent: :destroy
has_many :orders_placed, class_name: 'Order'
has_many :orders_serviced, class_name: 'Order'
has_many :ratings, foreign_key: :vendor_id
has_many :messages_sent, class_name: 'Message'
has_many :messages_received, class_name: 'Message'
accepts_nested_attributes_for :photos, allow_destroy: true

# avatar attachment
# adapter_options: { hash_digest: Digest::SHA256 }
# run upon changing hash_digest, CLASS=User ATTACHMENT
has_attached_file :avatar, styles: { medium: '300x300' },
  default_style: :medium,
  default_url: '/images/missing.png'

# presence: true
validates_attachment :avatar, size: { in: 0..100.kilobytes },
  content_type: { content_type: /\Aimage\/.*\Z/ },
  file_name: { matches: [/^\w+(-|\s|\.|_)+\w+$/]}

# has_many :photos, dependent: :destroy
```

```
has_many :orders_placed, class_name: 'Order'
has_many :orders_serviced, class_name: 'Order'
has_many :ratings, foreign_key: :vendor_id
has_many :messages_sent, class_name: 'Message'
has_many :messages_received, class_name: 'Message'
accepts_nested_attributes_for :photos, allow_destroy: true

# avatar attachment
# adapter_options: { hash_digest: Digest::SHA256 }
# run upon changing hash_digest, CLASS=User ATTACHMENT
has_attached_file :avatar, styles: { medium: '300x300' },
  default_style: :medium,
  default_url: '/images/missing.png'
```

Contributions

- Addresses **critical literature gaps** in the usage and adoption of Generative AI in HR.
- Examines influence of **employee and HRM professional trustworthiness perceptions** for development considerations.
- Advocates for **interdisciplinary collaboration**.
- Aims for ethical deployment of GAI in the evolving HR tech landscape.

Limitations

- The constantly evolving nature of GAI & AI technologies.
- The inherent subjectivity in meta-ethnology/narrative review research methodologies.

Conclusions



This research delves into the ethical dimensions of the use of **Generative AI in HR practices**, offering insights through a comprehensive literature review.

Acknowledging limitations like the evolving technology and potential bias, it addresses **critical gaps in literature** and **advocates for interdisciplinary collaboration** for responsible and transparent GAI development & deployment within HR practices.



Thanks for listening!

Any questions?

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**Special thanks to Dr. Skorburg, my supervisor!*

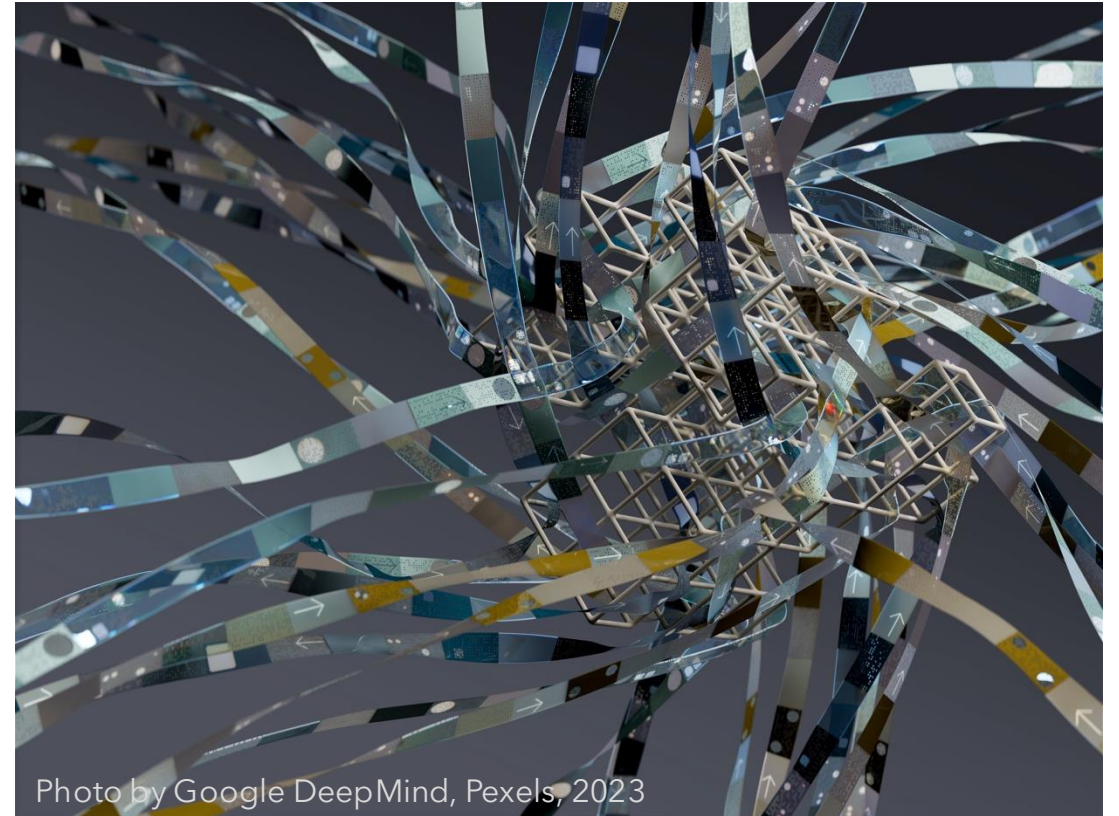


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References

- American Psychological Association. (n.d.). *Ethical principles of psychologists and code of conduct*. American Psychological Association. <https://www.apa.org/ethics/code>
- Amnesty International. (2019). Surveillance Giants: How The Business Model of Google and Facebook Threatens Human Rights. Amnesty International.
- Barocas, S., & Selbst, A. D. (2016). Big Data's Disparate Impact. *California Law Review*, 104(3), 671–732. <http://www.jstor.org/stable/24758720>
- Brougham, D., & Haar, J. (2017). Smart Technology, Artificial Intelligence, robotics, and Algorithms (stara): Employees' perceptions of our future workplace. *Journal of Management & Organization*, 24(2), 239–257. <https://doi.org/10.1017/jmo.2016.55>
- Bogen, M., & Rieke, A. (2018). Help Wanted—An Exploration of Hiring Algorithms, Equity and Bias. Upturn. <https://www.upturn.org/static/reports/2018/hiring-algorithms/files/Upturn%20--%20Help%20Wanted%20-%20An%20Exploration%20of%20Hiring%20Algorithms,%20Equity%20and%20Bias.pdf>.
- Bommasani, R., Hudson, D. A., Adeli, E., Altman, R., Arora, S., von Arx, S., Bernstein, M. S., Bohg, J., Bosselut, A., Brunskill, E., Brynjolfsson, E., Buch, S., Card, D., Castellon, R., Chatterji, N. S., Chen, A. S., Creel, K. A., Davis, J., Demszky, D., et al. (2021). On the Opportunities and Risks of Foundation Models. ArXiv. Retrieved from <https://crfm.stanford.edu/assets/report.pdf>
- Bonnefon, J.-F., Rahwan, I., & Shariff, A. (2023). *The Moral Psychology of Artificial Intelligence*.
- da Motta Veiga, S. P., Figueroa-Armijos, M., & Clark, B. B. (2023). Seeming ethical makes you attractive: Unraveling how ethical perceptions of ai in hiring impacts organizational innovativeness and attractiveness. *Journal of Business Ethics*, 186(1), 199–216. <https://doi.org/10.1007/s10551-023-05380-6>
- Dennis, M. J., & Aizenberg, E. (2022). The ethics of AI in human resources. *Ethics and Information Technology*, 24(3). <https://doi.org/10.1007/s10676-022-09653-y>
- France, E. F., Wells, M., Lang, H., & Williams, B. (2016). Why, when and how to update a meta-ethnography qualitative synthesis. *Systematic Reviews*, 5(1). <https://doi.org/10.1186/s13643-016-0218-4>
- Garg S, Sinha S, Kar AK, Mani M. A review of machine learning applications in human resource management. *Int J Product Perform Manag*. 2022; 71(5):1590–610. doi:10.1108/IJPPM-08-2020-0427.
- Gonzalez, M., Capman, J., Oswald, F., Theys, E., & Tomczak, D. (2019). "Where's the i-o?" Artificial Intelligence and machine learning in talent management systems. *Personnel Assessment and Decisions*, 5(3). <https://doi.org/10.25035/pad.2019.03.005>
- Hunkenschroer, A. L., & Luetge, C. (2022). Ethics of ai-enabled recruiting and selection: A review and research agenda. *Journal of Business Ethics*, 178(4), 977–1007. <https://doi.org/10.1007/s10551-022-05049-6>
- Köchling, A., & Wehner, M. C. (2020). Discriminated by an Algorithm: A systematic review of discrimination and fairness by algorithmic decision-making in the context of HR recruitment and HR development. *Business Research*, 13(3), 795–848. <https://doi.org/10.1007/s40685-020-00134-w>

References

- Landers, R. N., & Behrend, T. S. (2023a). Auditing the AI auditors: A framework for evaluating fairness and bias in high stakes AI predictive models. *American Psychologist*, 78(1), 36-49. <https://doi.org/10.1037/amp0000972>
- Li, L., Lassiter, T., Oh, J., & Lee, M. K. (2021). Algorithmic hiring in practice. *Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society*. <https://doi.org/10.1145/3461702.3462531>
- Miller, D. (2017). Distributive justice. *Distributive Justice*, 297-320. <https://doi.org/10.4324/9781315257563-10>
- Newman, D. T., Fast, N. J., & Harmon, D. J. (2020). When eliminating bias isn't fair: Algorithmic reductionism and Procedural Justice in human resource decisions. *Organizational Behavior and Human Decision Processes*, 160, 149-167. <https://doi.org/10.1016/j.obhdp.2020.03.008>
- Noblit, G. W. (2019). Meta-ethnography in Education. *Oxford Research Encyclopedia of Education*. <https://doi.org/10.1093/acrefore/9780190264093.013.348>
- Ooi, K.-B., Tan, G. W.-H., Al-Emran, M., Al-Sharafi, M. A., Capatina, A., Chakraborty, A., Dwivedi, Y. K., Huang, T.-L., Kar, A. K., Lee, V.-H., Loh, X.-M., Micu, A., Mikalef, P., Mogaji, E., Pandey, N., Raman, R., Rana, N. P., Sarker, P., Sharma, A., ... Wong, L.-W. (2023). The potential of generative artificial intelligence across disciplines: Perspectives and Future Directions. *Journal of Computer Information Systems*, 1-32. <https://doi.org/10.1080/08874417.2023.2261010>
- Oswald, F. L., Behrend, T. S., Putka, D. J., & Sinar, E. (2020). Big Data in industrial-organizational psychology and Human Resource Management: Forward Progress for Organizational Research and Practice. *Annual Review of Organizational Psychology and Organizational Behavior*, 7(1), 505-533. <https://doi.org/10.1146/annurev-orgpsych-032117-104553>
- Pagano, T. P., Loureiro, R. B., Lisboa, F. V., Peixoto, R. M., Guimarães, G. A., Cruz, G. O., Araujo, M. M., Santos, L. L., Cruz, M. A., Oliveira, E. L., Winkler, I., & Nascimento, E. G. (2023). Bias and unfairness in Machine Learning Models: A systematic review on datasets, tools, fairness metrics, and identification and mitigation methods. *Big Data and Cognitive Computing*, 7(1), 15. <https://doi.org/10.3390/bdcc7010015>
- Raj, R., Singh, A., Kumar, V., & Verma, P. (2023). Analyzing the potential benefits and use cases of chatgpt as a tool for improving the efficiency and effectiveness of business operations. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations*, 3(3), 100140. <https://doi.org/10.1016/j.tbench.2023.100140>
- Robert, L. P., Pierce, C., Marquis, L., Kim, S., & Alahmad, R. (2020). Designing fair AI for managing employees in Organizations: A Review, Critique, and Design Agenda. *Human-Computer Interaction*, 35(5-6), 545-575. <https://doi.org/10.1080/07370024.2020.1735391>
- Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial Intelligence in human resources management: Challenges and a path forward. *California Management Review*, 61(4), 15-42. <https://doi.org/10.1177/0008125619867910>
- Wach, K., Duong, C.D., Ejdy, J., Kazlauskaitė, R., Korzynski, P., Mazurek, G., Paliszkiwicz, J., & Ziemba, E. (2023). The dark side of generative artificial intelligence: A critical analysis of controversies and risks of ChatGPT. *Entrepreneurial Business and Economics Review*, 11(2), 7-30. <https://doi.org/10.15678/EBER.2023.110201>
- Yam, J., & Skorb, J. A. (2021). From Human Resources to Human Rights: Impact Assessments for hiring algorithms. *Ethics and Information Technology*, 23(4), 611-623. <https://doi.org/10.1007/s10676-021-09599-7>