AI and HR: Understanding Opportunities, Challenges, and Risks

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CUPA-HR Webinar

Presenter

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Human Resources Information Systems,
University of Alabama at Birmingham
Goals/Agenda

• Get a better understanding of AI and how it works
• Understand its impact on HR – Opportunities, Challenges, and Risks
• What you can do to continue your awareness and adoption journey
How we got here: Evolution of tech – productivity tools to automated operations

**Enterprise Technology**
- **1990’s**
  - Task Automation
- **2000’s**
  - ERP Systems
- **2010’s**
  - Cloud Systems (SaaS)
- **2020’s**
  - AI, Blockchain?

**Consumer Technology**
- **2000’s**
  - eCommerce
- **2010’s**
  - Direct to consumer apps/solutions
- **2020’s**
  - Generative AI

**Timeline Events**
- **1998**
  - First Internet Browser
- **2007**
  - iPhone
- **2017**
  - Deep Learning
- **2023**
  - ChatGPT
The technology hype cycle

- Innovation Trigger
- Peak of Inflated Expectations
- Trough of Disillusionment
- Slope of Enlighten
- Plateau of Productivity
What exactly is AI? Data Science vs AI

Data science – engineering approach to data

The main objective of data science is to extract meaningful insights, patterns, and knowledge from large and complex datasets to drive informed decision-making, solve business problems, optimize processes, or gain a deeper understanding of phenomena.

AI

The primary objective of AI is to develop systems that can simulate human intelligence, understand, reason, and perform tasks autonomously or with minimal human intervention. AI aims to create intelligent agents capable of learning, adapting, and making intelligent decisions.
How does AI work?

Machine Learning (ML): Provide a way for systems to synthesize data, learn from it and use the insights to improve over time. ML turns the traditional programming model upside down.

Deep Learning
A ML technique in which layers of neural networks are used to process data and make decisions.

Generative AI
Create new written, visual, auditory content.

Source: Data Science Concepts and Practice (2019) Vijay Kotu and Bala Deshpande
How does Machine Learning work?

What goes in... Influences what comes out

Large Data Sets
Training Data

Machine Learning

Controls

Output Models

What do we need to consider?
- Where/How the data was sourced
- Quality of data
- What parameters/controls (if any) were put in place?

In 2020, OpenAI released GPT-3, which featured 12,288-dimensional word vectors and 96 layers, for a total of 175 billion parameters.
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## Challenges

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Limitations of Machine Learning</td>
<td>Correlation vs Causation; Perpetuating Data Bias; lack of transparency, AI does not know the &lt;why&gt;</td>
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<tr>
<td>Data Hallucinations</td>
<td>Inherent risk of Generative AI</td>
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<tr>
<td>Bias and Discrimination</td>
<td>Human bias in data sets that is perpetuated in AI models</td>
</tr>
<tr>
<td>Limited Effectiveness for HR</td>
<td>Human behavior is complex and majority of human decision making factors are outside of HR data sets</td>
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<tr>
<td>Repeatability</td>
<td>Generative AI does not work in applications where repeatable, predictive results are expected</td>
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Example

GENRE: professional conference | EMOTION: excitement | SCENE: A professional male giving a presentation to a captive conference audience of approximately 50 people | LOCATION TYPE: conference classroom | STYLE: real life photograph | TAGS: professional, work, Human Resources
Future of Generative AI applications in the workplace

• **Productivity Tools:**
  Voice synthesis, image generation, writing aids, language translation, chatbots, content summarization, music and art generation, code auto-generation, speech to text, and others.

• **Enterprise solutions:**
  Where the “why” does not matter. And where 80% is good enough and there is sufficient oversight with minimal risk.
## AI and HR: Opportunities (Productivity)

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<tr>
<td><strong>Marketing and Communications</strong></td>
<td>Create flyers, announcement, memos, employee communications, presentations, etc. (<a href="#">ChatGPT*</a>)</td>
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<tr>
<td></td>
<td>Generate generic/stock images to support above activities and more (<a href="#">Mid Journey, Dall-E, DreamStudio, Microsoft Designer</a>)</td>
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<td>Making sure your emails to your co-workers is worded with the right nuances (<a href="#">ChatGPT</a>)</td>
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<tr>
<td><strong>Learning and Development</strong></td>
<td>Voice synthesis for training videos (<a href="#">Speechify</a>), better closed captioning, auto-creation of “how to” documents (<a href="#">Tango</a>)</td>
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<td>Learning new skills at your own pace- custom training plans (<a href="#">ChatGPT</a>)</td>
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<tr>
<td><strong>Talent Acquisition</strong></td>
<td>Analyzing individual resumes, cover letters, first draft of job descriptions. Drafting interview questions, (<a href="#">ChatGPT</a>)</td>
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*ChatGPT used as a synonym for Text based generative AI tools as ChatGPT, Microsoft Co-pilot, Google Gemini*
## AI and HR: Opportunities (Productivity)

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<td><strong>Compensation</strong></td>
<td>First draft of job descriptions. (<a href="https://www.chatgpt.com">ChatGPT</a>)</td>
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<td><strong>Performance Management</strong></td>
<td>Summarizing your yearly accomplishments, evaluating your goals to make sure they meet the SMART criteria, developing draft training plans,</td>
</tr>
<tr>
<td><strong>Employee Engagement</strong></td>
<td>Summarization of employee written responses to keep them anonymous (<a href="https://www.chatgpt.com">ChatGPT</a>)</td>
</tr>
<tr>
<td><strong>General Use</strong></td>
<td>Developing Project Plans, Communication Plans, Change Management, Researching (<a href="https://www.scholargpt.com">ScholarGPT</a>), Meeting Summaries (<a href="https://www.otter.ai">Otter.ai</a>), Idea Generation, etc.</td>
</tr>
<tr>
<td><strong>Personal Use</strong></td>
<td>Writing, problem solving, learning, creating content – written, speech, music generation, image generation, creating games, idea generation, coaching, etc.</td>
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AI and HR: Opportunities (Enterprise)

**Talent Acquisition**

*Identify suitable candidates* by analyzing resumes, cover letters, and job descriptions. AI-powered recruitment tools can also screen and filter job applications based on predefined criteria.

**Employee Engagement**

*Analyze data on employee engagement*, such as surveys, feedback, and performance reviews. This data can help HR teams to identify trends, monitor employee satisfaction, and implement changes to improve employee engagement.

**Performance Management**

Monitor performance, progress, and provide *personalized feedback to employees*. AI-powered performance management tools can also identify areas of improvement and suggest training or development programs.
AI and HR: Opportunities

**Employee retention**

Identify factors that contribute to employee turnover, such as workload, job satisfaction, and work-life balance. By analyzing this data, HR teams can develop strategies to improve employee retention.

**Learning and Development**

Personalize learning and development programs for individual employees based on their learning style, job role, performance, and career goals.

**HR analytics**

Analyze data on employee demographics, job satisfaction, turnover rates, and other HR metrics. This can provide valuable insights into workforce trends, which can help HR teams to make data-driven decisions.
Risks

- Inherent risks of a new technology – bugs, errors, glitches
- Data misuse and privacy – for AI models to work effectively, they need access to large swaths of data
- Bias and Discrimination in outputs
- Regulatory Compliance Risks (EEOC and other legal requirements)
- Fairness and Transparency
- Unknown Risks and consequences of a nascent technology
Role of HR in the future of AI

- **AI Governance**
  HR plays a key role in ethics, policy development, compliance and risk related to bias, and data privacy.

- **AI Skills Training**
  To use AI productivity tools responsibly.

- **Workforce Planning**

- **Combating Disinformation**
  Build employee skills in areas of information literacy, critical thinking, media literacy, source evaluation etc. to differentiate information from disinformation. Issues like disinformation, phishing attacks, etc. will get inherently more sophisticated and harder to spot.
Online resources

- Higher Ed in the Age of AI: A Human Centered Approach
- Master the perfect ChatGPT prompt formula
- Prompt Engineering Guide
- Midjourney Tutorial for beginners
- edX: Prompt Engineering and Advanced ChatGPT
- AI in Practice: Preparing for AI (delftX) edX online 5 week
- Khan Academy – What is AI and how does it work
- IBM: AI for Everyone: Master the Basics
- How AI Will Disrupt The HR Tech Market, And Also The HR Function Itself.- Josh Bersin Academy
- A jargon-free explanation of how AI large language models work

Government Resources
- EEOC: Artificial Intelligence and Algorithmic Fairness Initiative
- Whitehouse: Blueprint for an AI Bill of Rights
Have a Question?

Submit questions to our presenters using the Chat.
AI Governance

• Establish a governance committee that will oversee:
  • Ethical and Responsible use of AI
  • Risk Management and Mitigation
  • Resource Allocation and Efficiency
  • Regulatory Compliance

• Committee would typically include representation from:
  • Office of Risk and Compliance
  • Office of Counsel
  • Information Technology
  • Human Resources
  • Marketing/Communication
  • Office of Provost
  • Office of Research
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Thank You

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