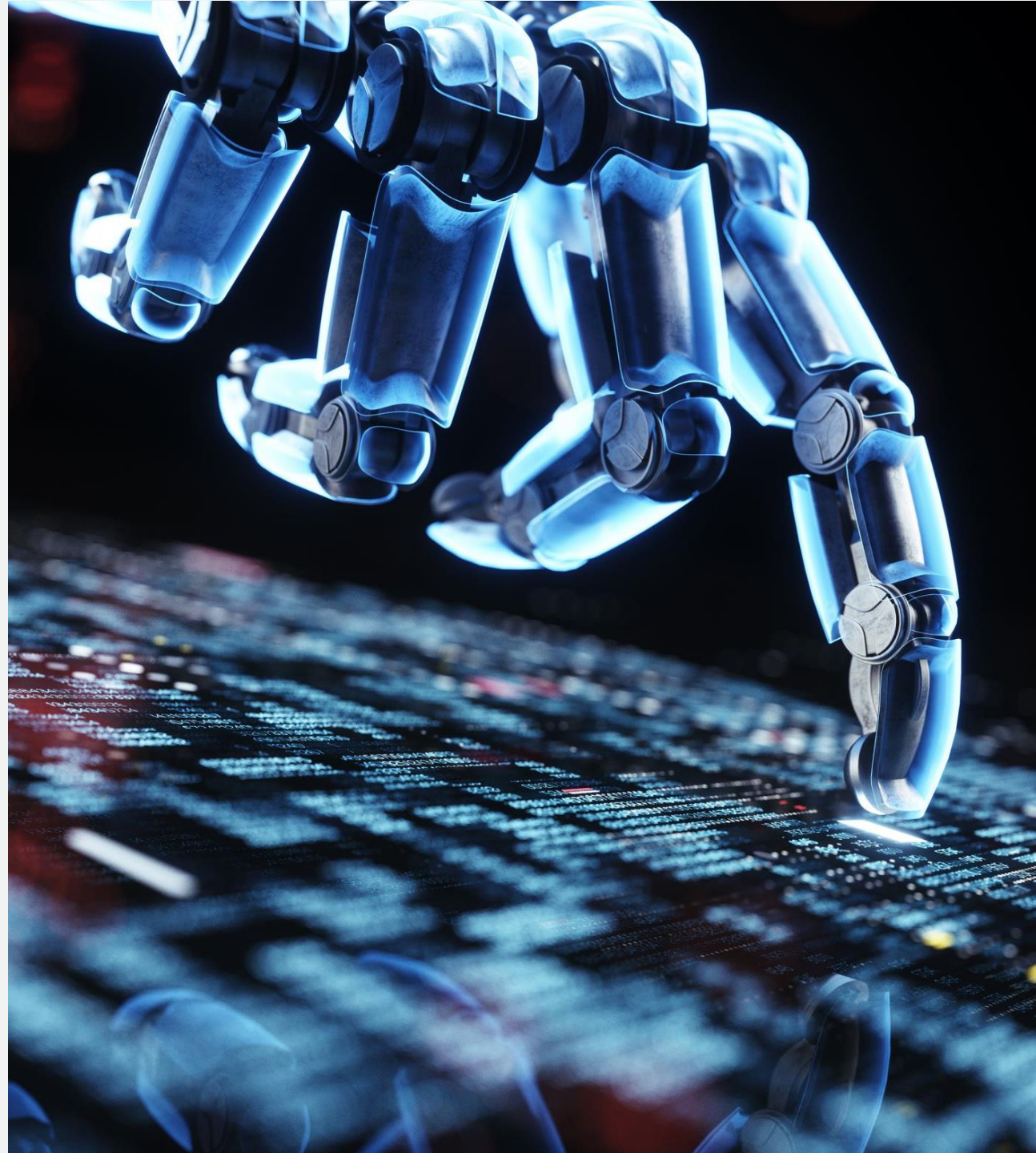


# AI use cases





# AI use cases: ChatGPT in Academia

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- An introduction to ChatGPT, a powerful AI language model, and its transformative potential in university teaching, research, and administration



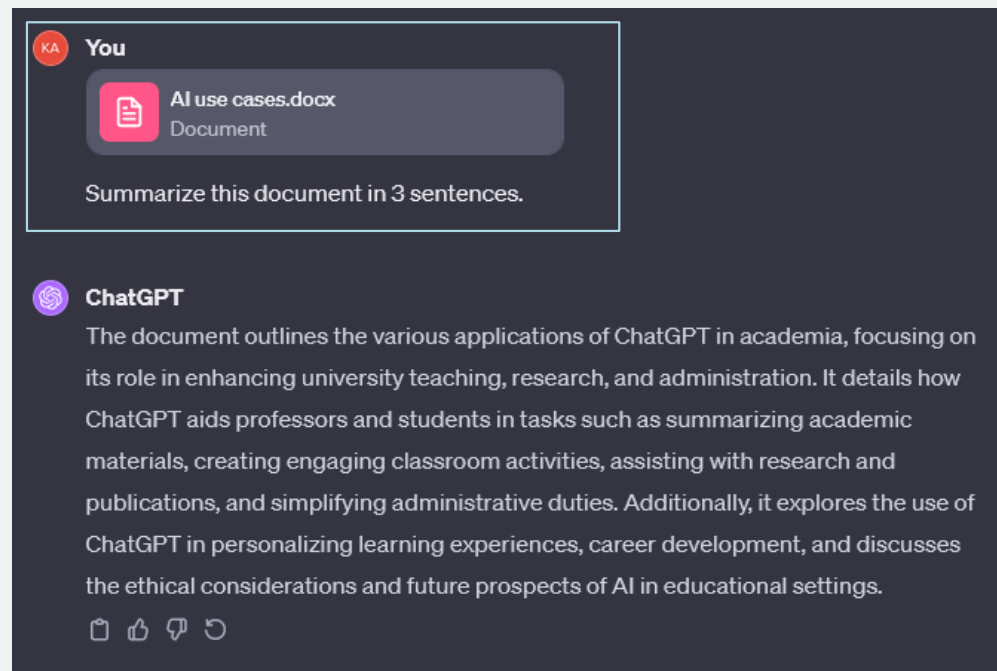
# ChatGPT for Professors – Overview

---

- Exploring how ChatGPT aids in teaching, research, and administrative tasks, with a focus on applications such as summarizing materials, classroom engagement, research assistance, administrative efficiency, and tender applications

# Summarizing Academic Materials

- Summarizing a complex research paper's abstract for easier class discussion



The screenshot shows a chat interface with a dark background. At the top, a user labeled 'You' (with a 'KA' icon) has uploaded a document titled 'AI use cases.docx' (with a document icon). Below the upload, the text reads 'Summarize this document in 3 sentences.' The response from 'ChatGPT' (with a purple icon) is a paragraph summarizing the document's content. At the bottom of the chat bubble, there are four small icons: a copy icon, a thumbs-up icon, a thumbs-down icon, and a refresh icon.

**You**

AI use cases.docx  
Document

Summarize this document in 3 sentences.

**ChatGPT**

The document outlines the various applications of ChatGPT in academia, focusing on its role in enhancing university teaching, research, and administration. It details how ChatGPT aids professors and students in tasks such as summarizing academic materials, creating engaging classroom activities, assisting with research and publications, and simplifying administrative duties. Additionally, it explores the use of ChatGPT in personalizing learning experiences, career development, and discusses the ethical considerations and future prospects of AI in educational settings.

# Enhancing Classroom Engagement



GENERATING QUIZ QUESTIONS  
ON A SPECIFIC TOPIC



CREATING UNIQUE CASE  
STUDIES FOR CLASSROOM  
DEBATES

# Generating quiz questions on a specific topic

KA You



zh2\_2023\_12\_06\_en-1d.pdf  
PDF

Write a similar example as the second example in the given pdf file for university students with a third-order differential equation.



ChatGPT

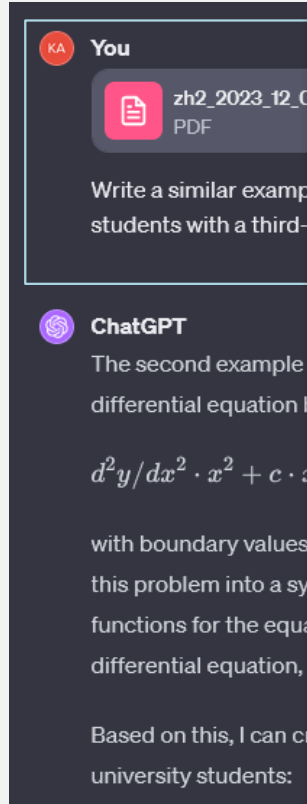
The second example in the PDF you provided is about solving a second-order ordinary differential equation boundary value problem. The given equation is:

$$d^2y/dx^2 \cdot x^2 + c \cdot x \cdot dy/dx - x^2 \cdot y = \sqrt{x^3 + 1}$$

with boundary values  $y(1) = 0$  and  $y'(10) = -0.05$ . The tasks include transforming this problem into a system of first-order differential equations, defining Matlab functions for the equation and boundary conditions, initializing and solving the differential equation, and finally plotting the function and its first derivative.

Based on this, I can create a similar example for a third-order differential equation for university students:

# Generating quiz questions on a specific topic



**Example: Solve the following third-order ordinary differential equation initial value problem:**

Given the third-order ordinary differential equation:

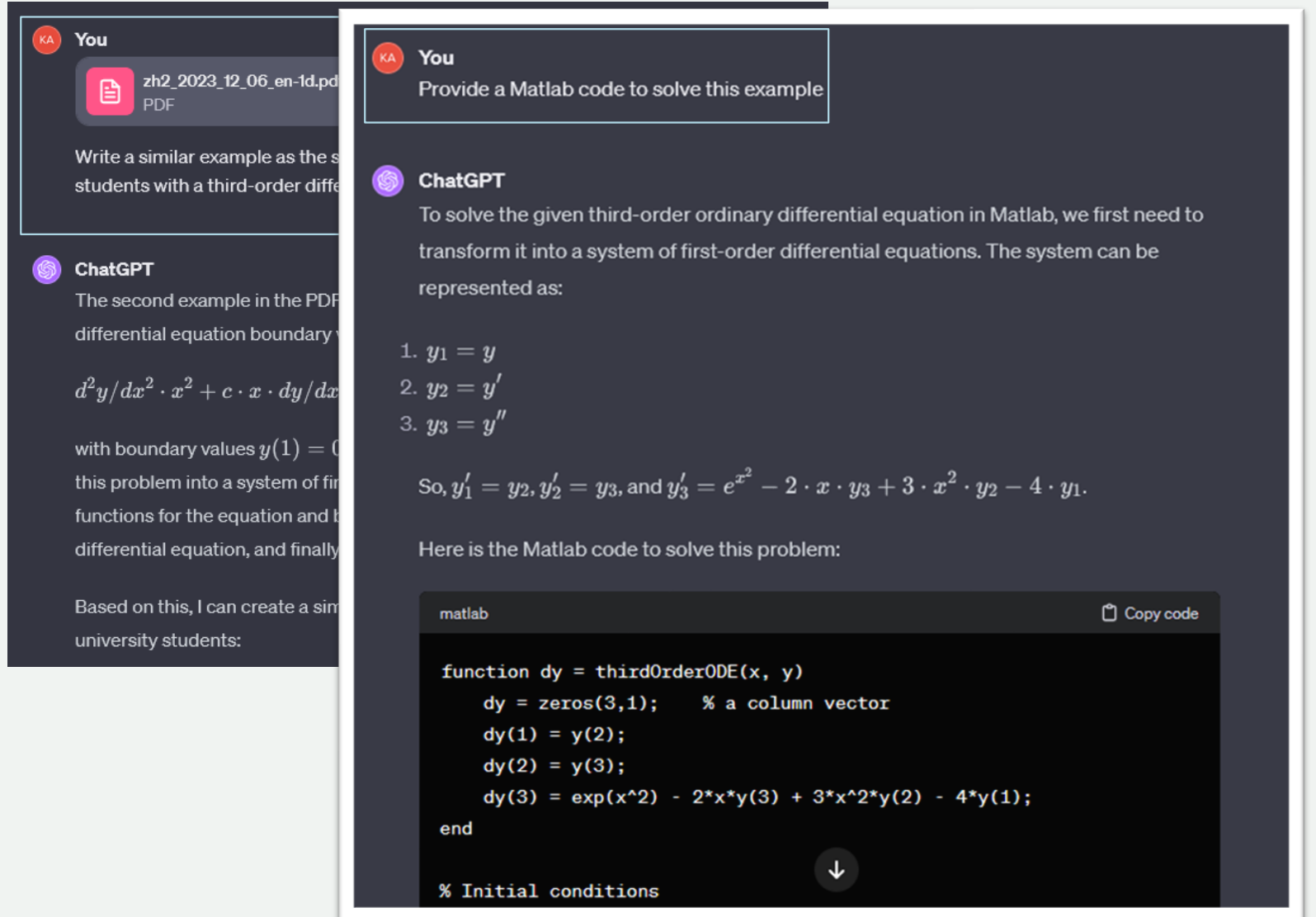
$$d^3y/dx^3 + 2 \cdot x \cdot d^2y/dx^2 - 3 \cdot x^2 \cdot dy/dx + 4 \cdot y = e^{x^2}$$

with the initial values  $y(0) = 1$ ,  $y'(0) = 0$ , and  $y''(0) = 2$ .


**Tasks:**

1. Transform the problem into a system of first-order differential equations.
2. Define the Matlab function for this system.
3. Initialize the solution and solve the differential equation.
4. Plot the function  $y(x)$ , and its first and second derivatives.
5. Determine and plot the maximum of the function on the interval  $[0, 5]$ .

# Generating quiz questions on a specific topic



The image shows a chat interface with a dark background. On the left, a vertical strip shows a blurred background of an open book and a pair of glasses. The main chat area contains the following text:

**You** (KA):  zh2\_2023\_12\_06\_en-1d.pdf PDF

Write a similar example as the students with a third-order differential equation boundary value problem.

**ChatGPT**: The second example in the PDF is a third-order ordinary differential equation boundary value problem:

$$d^2y/dx^2 \cdot x^2 + c \cdot x \cdot dy/dx = 0$$

with boundary values  $y(1) = 0$  and  $y(2) = 1$ . This problem can be transformed into a system of first-order differential equations by introducing two new functions for the equation and its first derivative, and finally solving the system of differential equations, and finally applying the boundary conditions.

Based on this, I can create a similar problem for university students:

**You** (KA): Provide a Matlab code to solve this example

**ChatGPT**: To solve the given third-order ordinary differential equation in Matlab, we first need to transform it into a system of first-order differential equations. The system can be represented as:

1.  $y_1 = y$
2.  $y_2 = y'$
3.  $y_3 = y''$

So,  $y_1' = y_2$ ,  $y_2' = y_3$ , and  $y_3' = e^{x^2} - 2 \cdot x \cdot y_3 + 3 \cdot x^2 \cdot y_2 - 4 \cdot y_1$ .

Here is the Matlab code to solve this problem:

```
matlab Copy code  
  
function dy = thirdOrderODE(x, y)  
    dy = zeros(3,1); % a column vector  
    dy(1) = y(2);  
    dy(2) = y(3);  
    dy(3) = exp(x^2) - 2*x*y(3) + 3*x^2*y(2) - 4*y(1);  
end  
  
% Initial conditions
```





# Assistance with Research and Publications

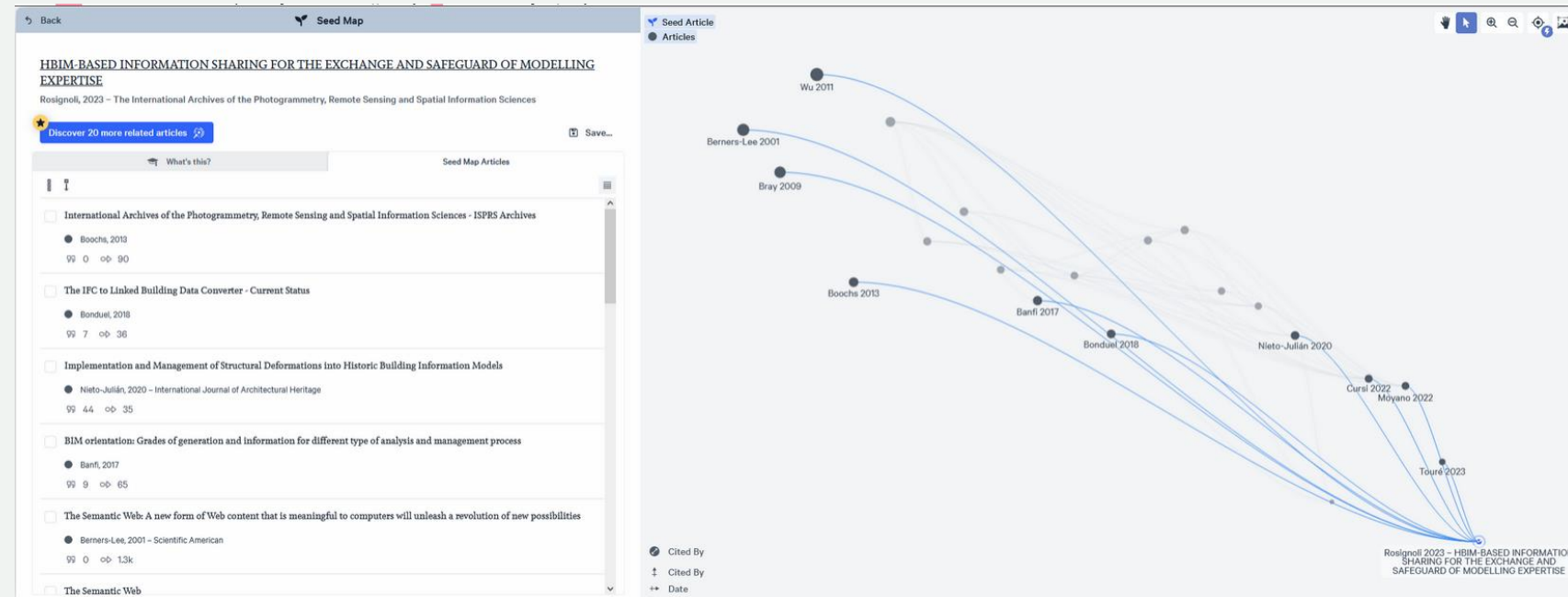
---

- Generating a research paper outline on a given topic
- Generate paragraphs based on given information, to properly phrase the content



# Literature Review

- Much better alternative: Litmaps - <https://app.litmaps.co/>





# Literature Review

- Much better alternative: Litmaps - <https://app.litmaps.co/>

Back Seed Map

Seed Article  
Articles

Scan-to-HBIM for conservation and preservation of Cultural Heritage building: the case study of San Nicola in Montedoro church (Italy)  
Costantino, 2021 - Applied Geomatics

Discover 20 more related articles Save...

What's this? Seed Map Articles

- MANAGEMENT OF BUILT HERITAGE VIA THE HBIM PROJECT: A CASE STUDY OF FLOORING AND WALL TILING LA GESTIÓN DEL PATRIMONIO CONSTRUIDO A TRAVÉS DEL PROYECTO HBIM: UN ESTUDIO DE CASO DE PAVIMENTOS Y  
● Nieto, 2018  
99 18 0 13
- OPEN SOURCE HBIM FOR CULTURAL HERITAGE: A PROJECT PROPOSAL  
● Diara, 2018 - The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences  
99 0 0 27
- Parametric Modeling and Heritage: A Design Process Sustainable for Restoration  
● Liberotti, 2023 - Sustainability  
99 33 0 1
- Human-Computer Interaction Based on Scan-to-BIM Models, Digital Photogrammetry, Visual Programming Language and eXtended Reality (XR)  
● Banfi, 2021 - Applied Sciences  
99 42 0 6
- Solutions and limitations of the geomatic survey of an archaeological site in hard to access areas with a latest generation smartphone: the example of the Intihuatana stone in Machu Picchu (Peru)  
● Balocchi, 2022 - ACTA IMEKO  
99 17 0 1
- ICV and fine-restoration algorithms for an efficient merge of point clouds

Murphy 2009 Murphy 2013 López 2018 Schwalbe 2005 Gomasasca 2009 Chlabrando 2017 Bruno 2018 Diara 2018 Nieto 2016 Costantino 2019 Costantino 2021 Wistayabkah 2021 Bastem 2021 Banfi 2021 Magni 2023 Semina 2022 Liberotti 2023

Cited By  
↑ Cited By  
++ Date



# Literature Review

- Much better alternative: Scispace - <https://typeset.io/>

The screenshot shows the Scispace website interface. At the top, there is a search bar with the query "What are the challenges and limitations of HBIM?". Below the search bar, there is a navigation menu on the left with options like Home, Library, Literature Review, Copilot, Citation generator, Paraphraser, AI Detector, Chrome Extension, and Talk with us. The main content area displays an "Insight from top 5 papers" section. The first paper is "HBIM e mapa de danos" by Felipe Barboza da Silva, published on 01 Jan 2022. The second paper is "Historic building information modelling (hbim) for malaysian construction industry" by Malsarah Ali, published on 05 Nov 2018. The third paper is "HBIM for Conservation: A New Proposal for Information Modeling" by N. Bruno, published on 25 Jul 2019. The right sidebar contains "My columns" and "POPULAR COLUMNS" sections.

**SCISPACE** | Search: What are the challenges and limitations of HBIM? | English (en) | Save

**Insight from top 5 papers**

The challenges and limitations of HBIM include the need for new skill sets and collaboration within the construction industry<sup>[1]</sup>. Interoperability issues between different tools and systems also hinder effective communication and management of information related to cultural heritage buildings<sup>[2]</sup>. The complex 3D modeling requirements and lack of shared regulatory references and guidelines for semantic data further limit the adoption of HBIM in conservation efforts<sup>[3]</sup>. Additionally, the extraction of geometries from point clouds obtained through laser scanning can be tedious and require expertise<sup>[4]</sup>. Despite these challenges, HBIM offers significant benefits such as enhanced communication, documentation, and a better understanding of historical buildings<sup>[5]</sup>. It also allows for the storage, management, and analysis of historical data, facilitating planned conservation efforts. Thematic mapping within HBIM systems can provide graphical representations of the state of conservation and structural situation of buildings.

Was this helpful? | Ask a follow up

PDF | Open Access | Top-tier papers | More filters | Sort by: Relevance | Export

Papers (10)	Insights	My columns
<p>Open access • Journal Article • DOI</p> <p><b>HBIM e mapa de danos</b></p> <p>Felipe Barboza da Silva +1 more</p> <p>01 Jan 2022 - PARC</p> <p>2 Citations   Ask Copilot</p>	<p>The paper does not provide specific information about the challenges and limitations of HBIM.</p>	<p>Try "Funding source"</p> <p>Create</p> <p>POPULAR COLUMNS</p> <ul style="list-style-type: none"><li>TLDR</li><li>Conclusions</li><li>Summarized Abstract</li><li>Results</li><li>Summarized Introduction</li><li>Methods Used</li><li>Literature Survey</li><li>Limitations</li><li>Contributions</li><li>Practical Implications</li></ul>
<p>Open access • Journal Article • DOI</p> <p><b>Historic building information modelling (hbim) for malaysian construction industry</b></p> <p>Malsarah Ali +4 more</p> <p>05 Nov 2018 - PLANNING MALAYSIA JOURNAL</p> <p>9 Citations   PDF   Ask Copilot</p>	<p>The paper mentions that the challenges of HBIM in the Malaysian construction industry include the need for new skill sets, collaboration, and a different way of relating to industry players.</p>	
<p>Open access • Journal Article • DOI</p> <p><b>HBIM for Conservation: A New Proposal for Information Modeling</b></p> <p>N. Bruno +1 more</p> <p>25 Jul 2019 - Remote Sensing</p> <p>79 Citations   Ask Copilot</p>	<p>The paper does not explicitly mention the challenges and limitations of HBIM.</p>	



# Literature Review

- Much better alternative: Scispace - <https://typeset.io/>

The screenshot displays the Scispace interface. At the top, there is a search bar with the query 'and limitations of Historic building information modelling (hbim)'. The left sidebar contains navigation options: Home, Library, Tools (Literature Review, Copilot - Read with AI, Citation generator, Paraphraser, AI Detector), and Chrome Extension. The main content area features a section titled 'Insight from top 5 papers' with a paragraph of text about HBIM challenges. Below this is a table of search results with columns for 'Papers (10)' and 'Insights'. The first row shows a paper titled 'Integrating Stakeholders' Priorities into Level of Development Supplemental Guidelines for HBIM Implementation' by Junshan Liu, dated 15 Feb 2023. The second row shows 'Synergy of Geospatial Data from TLS and UAV for Heritage Building Information Modeling (HBIM)' by Przemysław Kłapa, dated 26 Dec 2022. The third row shows 'Static Terrestrial Laser Scanning (TLS) for Heritage Building Information Modeling (HBIM): A Systematic Review' by Junshan Liu, dated 14 Apr 2023. On the right side, there is a 'My columns' section with a search box containing 'Contradictions' and a 'Create' button, and a 'POPULAR COLUMNS' list including TLDR, Conclusions, Summarized Abstract, Results, Summarized Introduction, Methods Used, Literature Survey, Limitations, Contributions, and Practical Implications.

# Literature Review

- Much better alternative: Scispace - <https://typeset.io/>

Add columns (5)  PDF  Open Access  Top-tier papers [More filters](#) Sort by: Relevance Export

Papers (10)	Insights	TL;DR	Results	Methods Used	Limitations	My columns
<p><a href="#">Open access</a> • <a href="#">Journal Article</a> • <a href="#">DOI</a></p> <p><input type="checkbox"/> <b>Integrating Stakeholders' Priorities into Level of Development Supplemental Guidelines for HBIM Implementation</b></p> <p>Junshan Liu <a href="#">+3 more</a> 15 Feb 2023 • Buildings</p> <p><a href="#">PDF</a> <a href="#">99</a> <a href="#">Ask Copilot</a></p>	<p>The paper does not explicitly mention the challenges and limitations of HBIM.</p>	<p>In this article , a review of 26 published HBIM case studies was conducted to identify the priorities of heritage building information model programs from a built heritage stakeholder's standpoint. And these priorities were used in conjunction with reviewed field standards to develop LOD supplement guidelines, which were then validated through a case study.</p>	<p>- Most HBIM methodologies did not understand the needs of stakeholders. - LOD guidelines for HBIM application are achievable and advisable.</p>	<p>- Review of 26 published HBIM case studies - Ten interviews with proprietors of historic courthouses in the southeastern United States</p>	<p>- Lack of clarity regarding information requirements from a tenant perspective. - Most HBIM methodologies did not understand the needs of assumptive stakeholders.</p>	<p>Try "Population age" <a href="#">Create</a></p> <p>POPULAR COLUMNS</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Conclusions</li><li><input type="checkbox"/> Summarized Abstract</li><li><input type="checkbox"/> Summarized Introduction</li><li><input type="checkbox"/> Literature Survey</li><li><input type="checkbox"/> Contributions</li><li><input type="checkbox"/> Practical Implications</li></ul>
<p><a href="#">Open access</a> • <a href="#">Journal Article</a> • <a href="#">DOI</a></p> <p><input type="checkbox"/> <b>Synergy of Geospatial Data from TLS and UAV for Heritage Building Information Modeling (HBIM)</b></p> <p>Przemysław Kłapa <a href="#">+1 more</a> 26 Dec 2022 • Remote sensing</p> <p>4 Citations <a href="#">PDF</a> <a href="#">99</a> <a href="#">Ask Copilot</a></p>	<p>The paper does not explicitly mention the challenges and limitations of Historic Building Information Modelling (HBIM).</p>	<p>In this paper , the authors presented the synergy of spatial data with TLS and UAV as the basis for creating a BIM model for two heritage objects, and the analyses led to conclusions in which the authors assign superior importance to the accuracy of measurement information and the integration of individual data groups in the process of developing the HBIM model with the desired accuracy in opposition to the appropriate selection of the level of detail.</p>	<p>- Synergy of TLS and UAV data for HBIM model - Importance of accuracy and integration of data</p>	<p>TLS and UAV data synergy for BIM modeling.</p>	<p>- Importance of accuracy in measurement information - Integration of individual data groups in HBIM model</p>	
<p><a href="#">Open access</a> • <a href="#">Journal Article</a> • <a href="#">DOI</a></p> <p><input type="checkbox"/> <b>Static Terrestrial Laser Scanning (TLS) for Heritage Building Information Modeling (HBIM): A Systematic Review</b></p> <p>Junshan Liu <a href="#">+3 more</a> 14 Apr 2023</p> <p><a href="#">PDF</a> <a href="#">99</a> <a href="#">Ask Copilot</a></p>	<p>The paper does not explicitly mention the challenges and limitations of Historic Building Information Modelling (HBIM).</p>	<p>In this article , the authors present a systematic review of TLS utilization in capturing reality data in order to recognize the status of applications of TLS for HBIM and identify the knowledge gaps on the topic.</p>	<p>- State-of-the-art practices of utilizing static TLS for HBIM - Identified knowledge gaps in TLS for HBIM</p>	<p>- Systematic review of TLS utilization for HBIM - Examination of 58 selected articles on TLS applications</p>	<p>- Absence of guidelines for using static TLS surveys for HBIM data acquisition - Lack of robust automated frameworks for producing/transferring 3D geometries and their attributes from TLS data to BIM entities</p>	

# Administrative Assistance



DRAFTING AN EMAIL TO  
SCHEDULE A DEPARTMENT  
MEETING



ORGANIZING THE FRAMEWORK  
OF A CONFERENCE

# Organizing the framework of a conference

 **You**

Write the framework of a one-day workshop conference, with 2 sessions. The main topics are digital twin challenges and applications with state-of-the-art BIM use cases.

 **ChatGPT**

Creating a framework for a one-day workshop conference focusing on digital twin challenges and applications, alongside state-of-the-art Building Information Modeling (BIM) use cases, requires a well-structured schedule. Here's a suggested framework:

**Conference Title:**

"Digital Twin and BIM Innovations: Challenges and Applications"



# Organizing the framework of a conference

Creating a framework for a one-day workshop conference focusing on digital twin challenges and applications, alongside state-of-the-art Building Information Modeling (BIM) use cases, requires a well-structured schedule. Here's a suggested framework:

## Conference Title:

"Digital Twin and BIM Innovations: Challenges and Applications"

## Date:

[Insert Date]

## Venue:

[Insert Venue]

---

## Morning Session: Digital Twin - Challenges and Solutions

### 8:00 - 9:00 AM: Registration and Welcome Breakfast

- Networking and Introduction

### 9:00 - 9:15 AM: Opening Remarks

- Overview of the Day
- Introduction to Digital Twins and BIM

### 9:15 - 10:15 AM: Keynote Speech: "The Evolution of Digital Twins"

- Speaker: [Expert in Digital Twin Technology]
- Topics: History, current state, and [future prospects](#) of digital twins

### 10:15 - 10:30 AM: Coffee Break

### 10:30 - 12:00 PM: Panel Discussion: "Overcoming Challenges in Digital Twin Implementation"

- Panelists: Industry experts, academicians, and technology leaders
- Discussion on challenges such as data integration, scalability, and security

### 12:00 - 1:00 PM: Lunch Break

---

## Afternoon Session: State-of-the-Art BIM Use Cases

### 1:00 - 2:00 PM: Workshop: "BIM in Practice: Real-World Applications"

- Hands-on session with case studies showcasing BIM [projects](#)
- Focus on innovative uses in construction, architecture, and urban [planning](#)

### 2:00 - 3:00 PM: Talk: "Integrating BIM with Digital Twins"

- Speaker: [Renowned BIM Specialist]
- Exploring the synergy between BIM and digital twins in project lifecycle management

### 3:00 - 3:15 PM: Coffee Break

### 3:15 - 4:30 PM: Interactive Session: "Future Trends in BIM and Digital Twin Technologies"

- Group discussions and interactive activities
- Exploring emerging trends and potential future applications

### 4:30 - 5:00 PM: Closing Remarks and Networking

- Summary of key takeaways
- Opportunity for further networking and discussion

### 5:00 PM: End of Conference

---

## Additional Features:

- Exhibition Area: Throughout the day, attendees can explore exhibits showcasing the latest in digital twin and BIM technologies.
- Networking App: A dedicated app for attendees to connect, schedule meetings, and exchange information.
- Post-Event Materials: Access to presentations, recordings, and additional resources for [attendees](#) post-conference.

This framework can be adjusted according to specific needs, audience, and available speakers or experts.

ChatGPT can make mistakes. Consider checking important information.

|



# Engaging with Tenders and Applications

- Improving a grant application paragraph for clarity and impact
- Brainstorm additional ideas for the proposal
- Tailor an old proposal for new requirements



# ChatGPT in Student Interactions

---

- Students utilize ChatGPT for academic support and personal organization, aiding in understanding course material, assignment assistance, and time management

# ChatGPT in Coursework and Learning

- Simplifying a complex physics concept for better understanding


## Model

It is known that, when omitting the scattered photons, the relation between the polychromatic projections and the linear attenuation coefficient of the scanned object is as follows [11]:

$$p(L) = -\log \int_0^{E_{MAX}} S(E) e^{-\int_L \mu(E, x) dx} dE, \quad L \in \mathcal{L} \quad (1)$$

where  $p(L)$  indicates the polychromatic projection along the x-ray path  $L \in \mathcal{L}$ , and  $\mathcal{L}$  is the set of x-ray paths.  $\mu(E, x)$  indicates the energy-dependent spatial distribution of the linear attenuation coefficient.  $E$  is the photon energy.  $S(E)$  is the normalized x-ray spectrum, which presents composite effect of the emission spectrum of the x-ray tube, the material and thickness of the detector scintillator, the material and thickness of the filter, etc. The CT imaging problem is to calculate the distribution of the linear attenuation coefficient  $\mu(E, x)$  from obtained polychromatic projections  $p(L)$  along different x-ray paths  $L \in \mathcal{L}$ .

 You

 journal.pone.0144607.PDF  
PDF

Explain the first equation in Layman terms.

 ChatGPT

The first equation in the document describes a mathematical model for beam hardening correction in computed tomography (CT) imaging. In layman's terms, it represents a method to correct distortions in CT images that occur due to the varying absorption of different energy levels of X-rays by different materials in the scanned object. This equation is part of a complex process to improve the accuracy and quality of CT images, particularly when they include multiple types of materials, ensuring that the final images more accurately represent the actual characteristics of the scanned object.

# ChatGPT in Coursework and Learning

- Explaining materials, formulas, expressions  
Scispace - <https://typeset.io/>

Explain the text

## Model

It is known that, when omitting the scattered photons, the relation between the polychromatic projections and the linear attenuation coefficient of the scanned object is as follows [1]:

$$p(L) = -\log \int_0^{r_{\max}} S(E) e^{-\int_0^L \mu(E, x) dx} dE, \quad L \in \mathcal{L} \quad (1)$$

where  $p(L)$  indicates the polychromatic projection along the x-ray path  $L \in \mathcal{L}$ , and  $\mathcal{L}$  is the set of x-ray paths.  $\mu(E, x)$  indicates the energy-dependent spatial distribution of the linear attenuation coefficient.  $E$  is the photon energy.  $S(E)$  is the normalized x-ray spectrum, which presents composite effect of the emission spectrum of the x-ray tube, the material and thickness of the detector scintillator, the material and thickness of the filter, etc. The CT imaging problem is to calculate the distribution of the linear attenuation coefficient  $\mu(E, x)$  from obtained polychromatic projections  $p(L)$  along different x-ray paths  $L \in \mathcal{L}$ .

11:44 PM

- The highlighted text presents a mathematical model that describes the relationship between the polychromatic projections and the linear attenuation coefficient of a scanned object.
- The equation is given as:  $P(L) = -\log \int_0^{r_{\max}} S(E) e^{-\int_0^L \mu(E, x) dx} dE$ ,  $L \in \mathcal{L}$  where  $P(L)$  represents the polychromatic projection along the x-ray path  $L$ ,  $\mathcal{L}$  is the set of x-ray paths,  $\mu(E, x)$  represents the energy-dependent spatial distribution of the linear attenuation coefficient,  $E$  is the photon energy,  $S(E)$  is the normalized x-ray spectrum, and  $r_{\max}$  is the maximum value of  $r$ .

# ChatGPT in Coursework and Learning


- It can handle the materials even if it is written in a different language

تحديد فعالية أدوات التصوير المرصدة مع الهواتف الذكية في التوثيق ثلاثي الأبعاد للمواقع الأثرية  
القطيل، علي، حمدان

✓ اختيار مواقع نقاط الضبط على جسم الباتريما

إن الهدف من وضع هذه النقاط وتحديد إحداثياتها هو حساب هندسية النموذج وتقييم دقته الهندسية. تم اعتماد نقاط ضبط طبيعية الشكل (4) وذلك لأن زراعة نقاط ضبط صناعية لم يكن ممكناً نظراً لطبيعة التمثال الأمامية الضخمة. كما يتأمن وجود 6 نقاط ضبط (مع أن العدد الأمثل المطلوب هو ثلاث نقاط) رسمياً في مناطق تتداخل الصور بحيث تكون موزعة بشكل طولي موحد ضمن هذه المناطق، وذلك لضمان استكمال حساب بلوك الصور وإعادة إنشائها. توفر هذا العدد الكبير من نقاط الضبط إمكانية لاحقاً من استخدام بعضها كنقاط اختيار للحكم على نوعية التوجيه الخارجي للصور.

بما أنه لم تتوفر لدينا في الموقع كافة الشروط اللازمة لتحديد إحداثيات نقاط الضبط هذه بالتقاطع الفراغي (اعتبارها جزء من الشبكة الأساسية) فقد تم التعامل مع نقاط الضبط المزروعة على الدائري كما يتم التعامل مع نقاط الرفع التفاضلي أي أننا حسبنا إحداثياتها بالطريقة المباشر (الرؤية ومسافة وقرق ارتفاع). وبما أنه يمكن رؤية كل هذه النقاط من نقاط القاعدة فقد تم اعتماد القيم المتوسطة لهذه الإحداثيات (جدول 3).



شكل (4) نقطة الضبط على الجورما.

نقطة الضبط	X (m)	Y (m)	Z (m)
5	97.802	94.118	12.767
6	99.082	93.392	12.800
7	100.282	93.367	12.808

جدول (3). إحداثيات بعض نقاط الضبط المستخدمة.

لضمان التعرف الدقيق على نقاط الضبط خلال قيامها على الصور، فقد تم إنشاء كرت وصف لكل نقطة ضبط وذلك عن طريق تصويرها بالة تصوير الهاتف المحمول وتزويدها بشكل مباشر بعد عملية التصوير بالإضافة إلى تصويرها من خلال الجهاز المساحي وذلك أثناء عملية الرفع المساحي حيث تظهر نقطة تقاطع الشحرات المائتومترية الموقع الدقيق للنقطة الضبط (شكل 5).

Save as note Follow up

Summarize the text

باورع ذهان الهدف من زوالنقاطوتحديد احداثياتها بحساب هندسية النموذج وتقييم دقته الهندسية. تم اعتماد نقاط ضبط طبيعية الشكل (4) ولذا كانت نقاط ضبط صناعية لم يكن ممكناً نظراً لضخامة واطئة طبيعة المنشك ممكناً نظر قمتا بت مبن وجودأي المظروب بو (تأط... تأط) وسطياً في مناطق تتداخل الصورنقاط ضبط (مع أن

7:47 PM

- The highlighted text discusses the use of control points in photogrammetry for model calibration and accuracy assessment.
- Natural and artificial control points are used, with the latter being necessary for large-scale models.
- The coordinates of the control points are calculated mathematically, and a large number of control points allows for testing the quality of the external orientation of the camera.

Quickly ask these questions

- What are natural control points used for?
- Why are artificial control points necessary for large-scale models?
- How does a large number of control points help in testing the quality of the camera's external orientation?

Write a feedback

7:47 PM

Save as note Follow up

Explain Abstract of this paper in 2 lines. What are the cor +12 more

Write your question...

MATH



# ChatGPT in Coursework and Learning

- It can create your own tutorials, schedule to learn any topic

**You**  
I want to learn prompt engineering during the next week. How do you suggest I do that? Provide a detailed schedule to achieve my goal, and add links where I can find relevant information.

< 2 / 2 >

**ChatGPT**  
I did a [quick search](#) and here's what I discovered.

To learn prompt engineering effectively in a week, you can follow a structured plan utilizing various online resources. Here's a detailed schedule:

#### **Day 1-2: Introduction to Prompt Engineering**

- Start with an introduction to prompt engineering, understanding its basics and importance.
- Read the beginner's guide on prompt engineering from Analytics Vidhya for a foundational understanding.
- Explore the "Prompt Engineering Guide" on Learn Prompting, which offers an overview of the course, ethos, philosophy, and practical examples.


<https://learnprompting.org/docs/intro>

<https://github.com/dair-ai/Prompt-Engineering-Guide>




# ChatGPT in Coursework and Learning




 ChatGPT

Used **Prompt Perfect** ^

REQUEST TO PROMPT PERFECT 

```
{
  "text": "I want to learn prompt engineering in the next week. Can you provide a detailed schedule and relevant resources for achieving this goal?"
}
```

RESPONSE FROM PROMPT PERFECT 

```
{
  "rephrased": {
    "text": "In order to efficiently achieve my goal of learning prompt engineering within the next week, I kindly request a comprehensive and well-structured response. Could you please provide me with a detailed schedule outlining the specific tasks and activities I should undertake each day? Additionally, I would greatly appreciate any relevant resources, such as books, online tutorials, or practice exercises, that would aid me in mastering prompt engineering."
  }
}
```



# Enhancing Group Projects and Presentations

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- Creating an organized outline for a group project
- Brainstorm ideas for any topics





# ChatGPT in Career Development

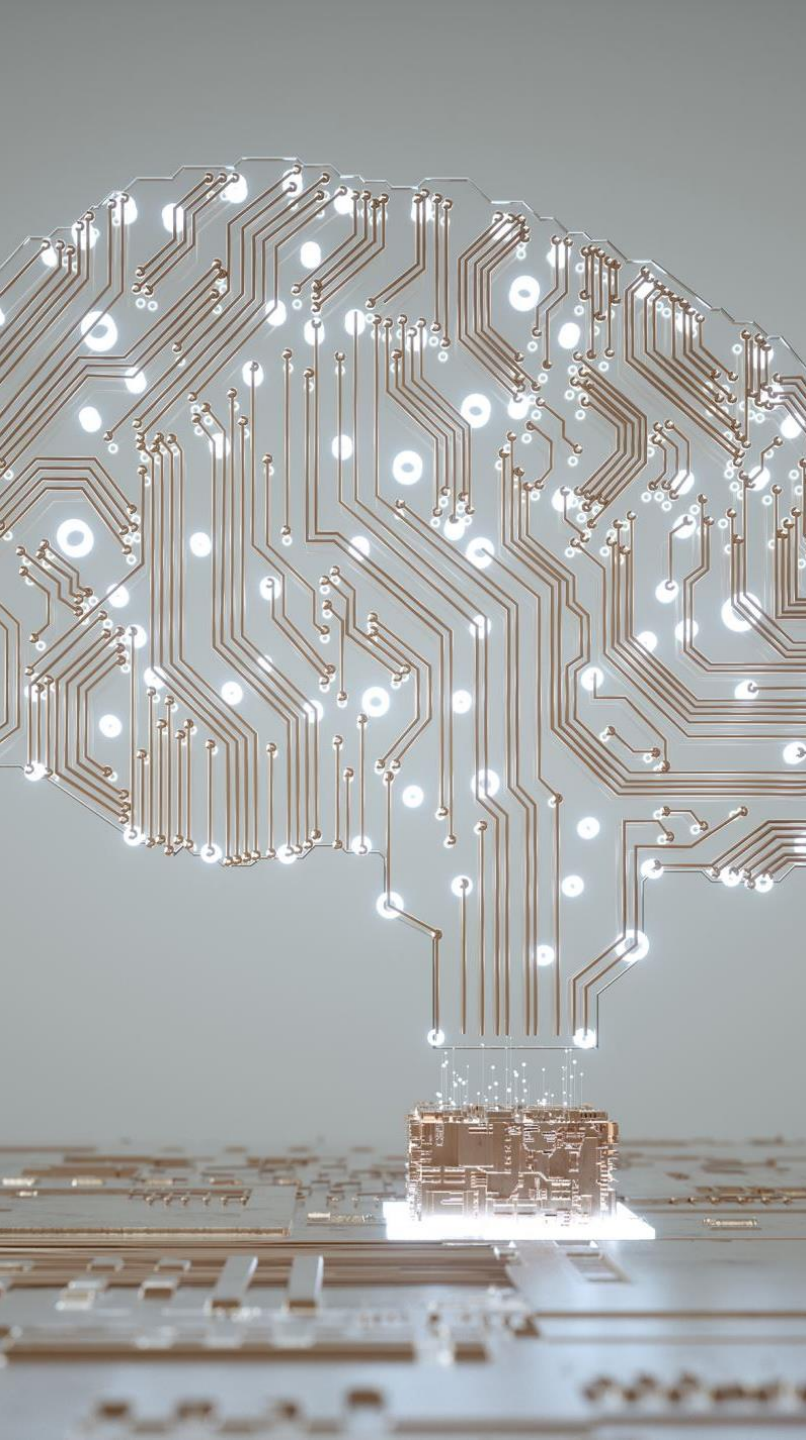
---

- ChatGPT can help in preparing resumes
- Enhancing a cover letter for greater impact
- Practicing for interviews.



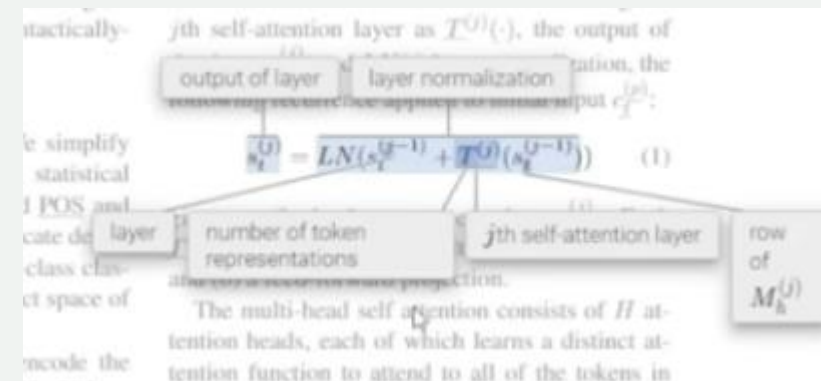
# Ethical Considerations and Best Practices

- AI use in academia should be done responsibly
- Currently, NASA has not authorized the operation of generative AI technologies (e.g., OpenAI, ChatGPT, GoogleBard, Facebook Llama, or similar) for widespread use on sensitive NASA data. While Generative AI technologies have impressive potential and ultimately may be used to great benefit in support of NASA missions, they also today pose significant risks
- Provide data for AI services only, if you would show the same publicly
- Always double-check the generated responses. The AI often hallucinates (makes up materials, links, literature with unusable DOI, etc.), so you should handle whatever it gives you as an unpolished draft. If the AI gives you an outline or a paragraph, always read it carefully, whether it aligns with your field/research area.



# Future Prospects and Continuing Development

- Exploring future AI advancements and their potential effects on education, encouraging adaptation and learning with AI tools
- Jenni.ai - <https://youtu.be/YLa9NWv1wzs?t=200>
- Scholarphi -





## Additional Resources

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- Providing resources for further reading on ChatGPT, including academic articles, tutorials, and online forums
- <https://www.youtube.com/watch?v=jC4v5AS4RIM>