

In [1]:

```
!pip install bs4
!pip install requests
```

Requirement already satisfied: bs4 in c:\users\rohan\anaconda3\lib\site-packages (0.0.1)
Requirement already satisfied: beautifulsoup4 in c:\users\rohan\anaconda3\lib\site-packages (from bs4) (4.11.1)
Requirement already satisfied: soupsieve>1.2 in c:\users\rohan\anaconda3\lib\site-packages (from beautifulsoup4->bs4) (2.3.1)
Requirement already satisfied: requests in c:\users\rohan\anaconda3\lib\site-packages (2.27.1)
Requirement already satisfied: idna<4,>=2.5 in c:\users\rohan\anaconda3\lib\site-packages (from requests) (3.3)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\rohan\anaconda3\lib\site-packages (from requests) (1.26.9)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\rohan\anaconda3\lib\site-packages (from requests) (2021.10.8)
Requirement already satisfied: charset-normalizer~=2.0.0 in c:\users\rohan\anaconda3\lib\site-packages (from requests) (2.0.4)

In [2]:

```
from bs4 import BeautifulSoup
import requests
```

In [5]:

```
page = requests.get('https://www.journals.elsevier.com/artificial-intelligence/most-down
```

In [6]:

```
page
```

Out[6]:

```
<Response [200]>
```

In [7]:

```
soup = BeautifulSoup(page.content)
soup
```

Out[7]:

```
<!DOCTYPE html>
<html><head><meta charset="utf-8"/><meta content="width=device-width" n
ame="viewport"/><meta content="en_US" name="og:locale"/><meta content
="Most Downloaded Articles - Artificial Intelligence - Journal - Elsevi
er" property="og:title"/><meta content="The journal of Artificial Intel
ligence (AIJ) welcomes papers on broad aspects of AI that constitute a
dvances in the overall field including, but not limited ..." property="o
g:description"/><meta content="http://ars.els-cdn.com/content/image/X00
043702.jpg" name="og:image" property="og:image"/><meta content="http://
ars.els-cdn.com/content/image/X00043702.jpg" name="og:image:url" proper
ty="og:image:url"/><meta content="https://ars.els-cdn.com/content/imag
e/X00043702.jpg" name="og:image:secure_url" property="og:image:secure_u
rl"/><meta content="journals.elsevier.com/artificial-intelligence/most-
downloaded-articles" name="og:url"/><meta content="website" property="o
g:type"/><link href="/apple-touch-icon.png" rel="apple-touch-icon" size
s="180x180"/><link href="/favicon-32x32.png" rel="icon" sizes="32x32" t
ype="image/png"/><link href="/favicon-16x16.png" rel="icon" sizes="16x1
6" type="image/png"/><link color="#ff6c00" href="/safari-pinned-tab.sv
```

In [9]:

```
title = soup.find('h2',class_="sc-1qrq3sd-1 gRGSUS sc-1nmom32-0 sc-1nmom32-1 btcbyu goSK
title
```

Out[9]:

```
<h2 class="sc-1qrq3sd-1 gRGSUS sc-1nmom32-0 sc-1nmom32-1 btcbyu goSKRg">Re
ward is enough</h2>
```

In [10]:

```
title.text
```

Out[10]:

```
'Reward is enough'
```

In [11]:

```
author = soup.find('span',class_="sc-1w3fpd7-0 dnCnAO")
author.text
```

Out[11]:

```
'David Silver, Satinder Singh, Doina Precup, Richard S. Sutton '
```

In [12]:

```
date = soup.find('span',class_="sc-1thf9ly-2 dvggWt")
date.text
```

Out[12]:

```
'October 2021'
```

In [17]:

```

title=[]
for i in soup.find_all('h2',class_="sc-1qrq3sd-1 gRGSUS sc-1nmom32-0 sc-1nmom32-1 btcbYu
    title.append(i.text.split('\n'))

title

```

Out[17]:

```

[['Reward is enough'],
 ['Explanation in artificial intelligence: Insights from the social sciences'],
 ['Creativity and artificial intelligence'],
 ['Conflict-based search for optimal multi-agent pathfinding'],
 ['Knowledge graphs as tools for explainable machine learning: A survey'],
 ['Law and logic: A review from an argumentation perspective'],
 ['Between MDPs and semi-MDPs: A framework for temporal abstraction in reinforcement learning'],
 ['Explaining individual predictions when features are dependent: More accurate approximations to Shapley values'],
 ['Multiple object tracking: A literature review'],
 ['A survey of inverse reinforcement learning: Challenges, methods and progress'],
 ['Evaluating XAI: A comparison of rule-based and example-based explanations'],
 ['Explainable AI tools for legal reasoning about cases: A study on the European Court of Human Rights'],
 ['Hard choices in artificial intelligence'],
 ['Assessing the communication gap between AI models and healthcare professionals: Explainability, utility and trust in AI-driven clinical decision-making'],
 ['Explaining black-box classifiers using post-hoc explanations-by-example: The effect of explanations and error-rates in XAI user studies'],
 ['The Hanabi challenge: A new frontier for AI research'],
 ['Wrappers for feature subset selection'],
 ['Artificial cognition for social human-robot interaction: An implementation'],
 ['A review of possible effects of cognitive biases on interpretation of rule-based machine learning models'],
 ['The multifaceted impact of Ada Lovelace in the digital age'],
 ['Robot ethics: Mapping the issues for a mechanized world'],
 ['Reward (Mis)design for autonomous driving'],
 ['Planning and acting in partially observable stochastic domains'],
 ['What do we want from Explainable Artificial Intelligence (XAI)? - A stakeholder perspective on XAI and a conceptual model guiding interdisciplinary XAI research']]

```

In [18]:

```
author=[]  
for i in soup.find_all('span',class_="sc-1w3fpd7-0 dnCnAO"):  
    author.append(i.text.split('\n'))  
  
author
```

Out[18]:

```
[['David Silver, Satinder Singh, Doina Precup, Richard S. Sutton '],  
 ['Tim Miller '],  
 ['Margaret A. Boden '],  
 ['Guni Sharon, Roni Stern, Ariel Felner, Nathan R. Sturtevant '],  
 ['Ilaria Tiddi, Stefan Schlobach '],  
 ['Henry Prakken, Giovanni Sartor '],  
 ['Richard S. Sutton, Doina Precup, Satinder Singh '],  
 ['Kjersti Aas, Martin Jullum, Anders Løland '],  
 ['Wenhan Luo, Junliang Xing and 4 more'],  
 ['Saurabh Arora, Prashant Doshi '],  
 ['Jasper van der Waa, Elisabeth Nieuwburg, Anita Cremers, Mark Neerincx  
'],  
 ['Joe Collenette, Katie Atkinson, Trevor Bench-Capon '],  
 ['Roel Dobbe, Thomas Krendl Gilbert, Yonatan Mintz '],  
 ['Oskar Wysocki, Jessica Katharine Davies and 5 more'],  
 ['Eoin M. Kenny, Courtney Ford, Molly Quinn, Mark T. Keane '],  
 ['Nolan Bard, Jakob N. Foerster and 13 more'],  
 ['Ron Kohavi, George H. John '],  
 ['Séverin Lemaignan, Mathieu Warnier and 3 more'],  
 ['Tomáš Kliegr, Štěpán Bahník, Johannes Fürnkranz '],  
 ['Luigia Carlucci Aiello '],  
 ['Patrick Lin, Keith Abney, George Bekey '],  
 ['W. Bradley Knox, Alessandro Allievi and 3 more'],  
 ['Leslie Pack Kaelbling, Michael L. Littman, Anthony R. Cassandra '],  
 ['Markus Langer, Daniel Oster and 6 more']]
```

In [19]:

```
date=[]  
for i in soup.find_all('span',class_="sc-1thf9ly-2 dvggwt"):  
    date.append(i.text.split('\n'))  
  
date
```

Out[19]:

```
[['October 2021'],  
 ['February 2019'],  
 ['August 1998'],  
 ['February 2015'],  
 ['January 2022'],  
 ['October 2015'],  
 ['August 1999'],  
 ['September 2021'],  
 ['April 2021'],  
 ['August 2021'],  
 ['February 2021'],  
 ['April 2023'],  
 ['November 2021'],  
 ['March 2023'],  
 ['May 2021'],  
 ['March 2020'],  
 ['December 1997'],  
 ['June 2017'],  
 ['June 2021'],  
 ['June 2016'],  
 ['April 2011'],  
 ['March 2023'],  
 ['May 1998'],  
 ['July 2021']]
```

In [20]:

```
print(len(title),len(author),len(date))
```

24 24 24

In [21]:

```
import pandas as pd
df=pd.DataFrame({'Title':title, 'Author':author, 'Date':date})
df
```

Out[21]:

	Title	Author	Date
0	[Reward is enough]	[David Silver, Satinder Singh, Doina Precup, R...]	[October 2021]
1	[Explanation in artificial intelligence: Insig...]	[Tim Miller]	[February 2019]
2	[Creativity and artificial intelligence]	[Margaret A. Boden]	[August 1998]
3	[Conflict-based search for optimal multi-agent...]	[Guni Sharon, Roni Stern, Ariel Felner, Nathan...]	[February 2015]
4	[Knowledge graphs as tools for explainable mac...]	[Ilaria Tiddi, Stefan Schlobach]	[January 2022]
5	[Law and logic: A review from an argumentation...]	[Henry Prakken, Giovanni Sartor]	[October 2015]
6	[Between MDPs and semi-MDPs: A framework for t...]	[Richard S. Sutton, Doina Precup, Satinder Sin...]	[August 1999]
7	[Explaining individual predictions when featur...]	[Kjersti Aas, Martin Jullum, Anders Løland]	[September 2021]
8	[Multiple object tracking: A literature review]	[Wenhan Luo, Junliang Xing and 4 more]	[April 2021]
9	[A survey of inverse reinforcement learning: C...]	[Saurabh Arora, Prashant Doshi]	[August 2021]
10	[Evaluating XAI: A comparison of rule-based an...]	[Jasper van der Waa, Elisabeth Nieuwburg, Anit...]	[February 2021]
11	[Explainable AI tools for legal reasoning abou...]	[Joe Collenette, Katie Atkinson, Trevor Bench-...]	[April 2023]
12	[Hard choices in artificial intelligence]	[Roel Dobbe, Thomas Krendl Gilbert, Yonatan Mi...]	[November 2021]
13	[Assessing the communication gap between AI mo...]	[Oskar Wysocki, Jessica Katharine Davies and 5...]	[March 2023]
14	[Explaining black-box classifiers using post-h...]	[Eoin M. Kenny, Courtney Ford, Molly Quinn, Ma...]	[May 2021]
15	[The Hanabi challenge: A new frontier for AI r...]	[Nolan Bard, Jakob N. Foerster and 13 more]	[March 2020]
16	[Wrappers for feature subset selection]	[Ron Kohavi, George H. John]	[December 1997]
17	[Artificial cognition for social human-robot i...]	[Séverin Lemaignan, Mathieu Warnier and 3 more]	[June 2017]
18	[A review of possible effects of cognitive bia...]	[Tomáš Kliegr, Štěpán Bahník, Johannes Fürnkra...]	[June 2021]
19	[The multifaceted impact of Ada Lovelace in th...]	[Luigia Carlucci Aiello]	[June 2016]
20	[Robot ethics: Mapping the issues for a mechan...]	[Patrick Lin, Keith Abney, George Bekey]	[April 2011]
21	[Reward (Mis)design for autonomous driving]	[W. Bradley Knox, Alessandro Allievi and 3 more]	[March 2023]
22	[Planning and acting in partially observable s...]	[Leslie Pack Kaelbling, Michael L. Littman, An...]	[May 1998]
23	[What do we want from Explainable Artificial I...]	[Markus Langer, Daniel Oster and 6 more]	[July 2021]

In []: