



BENCHMARKING OF AI-POWERED PATENT SEARCH SOFTWARES

Study conducted by students of the Master's program Data Science and Management of Innovation

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INTRODUCTION

In recent years, there has been a surge of interest and investment in artificial intelligence (Al), with many viewing it as a transformative technology that will change the way we live and work. However, along with the excitement come important questions and concerns about the impact of Al on society. One major area of concern is the potential for Al to perpetuate or even exacerbate existing biases and inequalities. Additionally, there is debate about the ethical implications of using Al in decision-making, as well as the potential for Al to outperform and replace human workers, leading to significant changes in the job market.

In the field of patent research, AI has emerged as a promising tool for helping companies and researchers navigate the complex landscape of patent law and intellectual property. Patent research software that incorporates AI can automate much of the search and analysis process, allowing users to quickly and easily identify relevant patents and potential infringements. Additionally, AI can help to uncover connections between patents that might not be immediately apparent to human researchers. As AI continues to advance and become more sophisticated, it is likely that we will see even more powerful patent research tools that can help users stay ahead of the curve in the competitive world of intellectual property.

To help CFIB, the sponsor of this study, better understand the characteristics of AI-powered patent search software and inform its members more effectively, students from the DSMI master's program at the Saint Etienne School of Economics conducted research on this topic as part of their curriculum. The results are presented in a benchmarking study format.



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AI-POWERED PATENT SEARCH SOFTWARE

15 software tools were evaluated for this benchmarking study:

Dolcera Cipher Mynd Focus Findest IPRally IPScreener Orbit ResoluteAl Averbis/Patent Monitor Eureka (Patsnap) Octmine CAS Patentpak Derwent Innovation XLPat



METHODOLOGY OVERVIEW

For each software, we collected a range of information to establish our comparison, including:

- The performance of their AI tools
- The usability of the interface and the user experience
- The quality of their patent databases
- The relevance of the results obtained

Three parallel evaluation methods were used:

- Performance tests (drone and chemistry) conducted by DSMI students based on the tests provided by CFIB.
- Collection of user reviews available online.
- Use of other recent benchmarks

It should be noted that some software programs could not be fully evaluated due to the lack of online information, limited access and testing opportunities.

The results presented below are a summary of the information collected by the DSMI Master's students. Additional information (tests, software publisher information, technical documentation, user reviews, software usage procedure, etc.) can be found in the documents attached to this study.



PARALLEL EVALUATION METHODS

Method I: Performance tests

- Two types of tests were used in two different fields: drone and chemistry. Orbit was considered in this study as the reference software and as a basis for comparison.
- Only three out of the 15 software programs were evaluated using the drone test due to its lack of relevance and inappropriate formulation to establish an objective (i.e. quantitative) comparison.
- For the chemistry test, and given that AI is supposed to have the ability to identify the topic being discussed, the most relevant comparison indicator selected for the tests was the number of relevant patents found through a simple search using either keywords or descriptive text containing those keywords.
- Access was fully granted for seven software programs (Dolcera, Cipher, Findest, IPRally, Orbit, Patsnap, Octimine), and partial/demo access was
 given for two (IPScreener, ResoluteAI).

Method 2: Collection of user reviews

- User reviews were collected from various online sources. We also directly contacted some users to obtain their feedback.
- Those reviews were used to assess the usability and user experience of the software programs, as well as the users' satisfaction with the software tools and databases

Method 3: Use of other benchmarks

• Other recent benchmarks were used to supplement the study results.



The final evaluation score was determined by aggregating the results of the three parallel evaluation methods.

LIMITATIONS

- The results of performance tests may not be perfectly representative of the software programs' actual performance, as they rely on machine learning principles.
- Test results may also not be representative of the power of AI algorithms if the software does not have complete databases
- Some software programs could not be tested due to limitations in access and testing.
- Two software programs, Mynd and Focus, were not evaluated due to these limitations and the lack of online information about them.



METHODOLOGY – RESULTS & SCORING METHOD

	Chemistry Case*	Drone Case*	User Reviews	External Benchmarks	Global Assessment	
Dolcera	-	-	++	n/a	-	
Cipher	+	n/a	+++	n/a	++	
Mynd-ware	n/a	n/a	n/a	n/a	?	
Focus	n/a	n/a	n/a	n/a	?	
Findest	-	-	n/a	n/a	-	*1 0.00
IPRally	+++	-	+++	++	+++	Lege
Ipscreener	n/a (demo)	n/a (demo)	n/a	+++	+++	
Orbit	++	n/a	+++	+++	+++	
ResoluteAl	n/a (demo)	n/a (demo)	+++	n/a	++	
Averbis / Patent Monitor	n/a	n/a	++	n/a	++	
Patsnap	+++	n/a	++	n/a	+++	
Octimine	+++	n/a	+++	++	+++	
CAS Patentpak	n/a	n/a	+++	n/a	+++	
Derwent Innovation	n/a	n/a	+++	n/a	+++	
XLPat	n/a	n/a	+++	++	++	

SAINT-ETIENNE SCHOOL OF ECONOMICS *Legend for the chemistry and drone cases:

Insufficient software performance
 + Performance inferior to Orbit's
 ++ Orbit's Performance
 +++ Performance superior to Orbit's

MAIN FINDINGS

The evaluated AI-powered software solutions can be categorized as follows:

- ✓ Generic software for patent search and analysis: Orbit, IPRally, Octimine, Dolcera, Cipher, Focus, IPRally, IPScreener, Eureka (Patsnap), Derwent Innovation
- ✓ Sector-specific software : CAS Patentpak (Chemistry & biology) and Averbis (Healthcare & Life Sciences)
- Technology/Science Intelligence software (patents, literature, regulatory and business data): Findest, ResoluteAl
- ✓ **Context-mining software**: Mynd



MAIN FINDINGS

- Patentpak and Averbis can be considered as relevant tools for patent research professionals working in the chemistry/biology and pharmaceutical/Life sciences sectors, respectively, with dedicated data and resources for these fields.
- Findest and especially <u>ResoluteAl</u> (and to a lesser extent <u>Cipher</u>) are tools that may interest professionals whose job incorporates some aspect of Business/Competitive Intelligence, involving the cross-analysis of business data, regulatory data, and/or scientific literature.
- ✓ Although untested, <u>Mynd</u> appears more as a complementary software for extracting and analyzing data from various document sources (business, patents, internal data, literature, etc.).
- ✓ Among the generic patent search software, <u>Optimine</u>, <u>IPRally</u>, and <u>Eureka</u> (<u>Patsnap</u>) are the software solutions that performed the best in our tests, with better performance than Orbit (see table below). We add <u>IPScreener</u> to this list, which we could only test in a limited version but has been shown to achieve even better results in a study conducted by Burkhard Schlechter for the Austrian Patent Office.



	Number of hits*
Orbit	5
Octimine	16
IPRally	14
Cipher	6
Findest	0
Eureka/Patsnap	9 (out of 25)
Dolcera	3

 First 50 results on the Simple query (« Chemicals » test) Comparison of generic softwares evaluated

SOFTWARE DATA SHEETS



bDolcera

Dolcera is a generalist patent search software that allows users to search for specific patents by applying precise filters and create infographics on the obtained results.

Launch Year	2004
Interface Language	English
Price	n/a
Data	I 10 million patents Global coverage, focused on Asia and the USA
AITechnology	Dolcera owns its search algorithm but remains opaque about its capabilities.
Customer reference	L'Oréal, Volvo, Airbus, Mercedes, Pepsico, Nestlé, PPG, Philip Morris, Qualcomm, Clariant, Novartis, Somalogic



bDolcera

User Experience

Results relevance

Customer Service & Documentation

Ergonomic, easy to use, with a learning curve facilitated by graphic elements and tutorials.

Variable, results can be very relevant for Asian patents, but less precise for global searches.

High-quality technical support but focused on Asian and American organizations
Outdated technical documentation

 Test results
 User reviews
 External benchmarks

 ★★★★★★★
 n/a

Overall Assessment

Dolcera can be effective when searching asian patents, but the overall results of our tests have been poor.

- Easy to learn
- Ergonomic and user-friendly interface
- Numerous tools to facilitate reading results
- Infographics to visualize data

- Less efficient for global patent searches
- Opacity about AI capabilities
- Outdated technical documentation
- Technical and customer support focused on Asian and American organizations



Cipher is a technology platform which uses artificial intelligence (AI) and machine learning to Provide customers insights into complex landscapes of patented technology to support their strategic IP decisions

Launch Year	2014
Interface Language	English
Price	n/a
Data	More than 44 million patents
	+100 countries
AITechnology	Cipher allows to "automate the manual process of sorting, tagging and classifying patents". Cipher also uses machine learning algorithms to calculate
	clusters, primarily driven by citations within the patent data, and also relies on a range of other information, including keywords, inventors, and IPC codes. The clusters are named using a separate NLP (natural language processing) algorithm. Cipher also supports full-text data search and analysis.
Customer reference	TriNetX, CGM, NaviHealth, Krebsregister, Universitätsklinnikum Freiburg, Universitätsklinikum Erlangen, LMU, Medizinische Universität Graz, Medizin
	Informatik Initiative, IQVIA, Merck, Roche, Bayer, Syngenta

Results relevance

Customer Service & Documentation

The interface is very simple and intuitive. It provides detailed and easy-to-read information, including useful graphs and analytics to highlight relevant data.

The technnology of Cipher's software allows for faster and more efficient searches, with a 36-fold increase in user productivity, according to Cipher's editor. However, the results of our tests were not very conclusive, due to to the small datasets included in the software.

Cipher offers a wide range of case studies and specialized documentation.

Effective customer service and training sessions.



Overall Assessment

IPHER

The quality of Cipher's analytics and graph features makes it a very relevant tool for competitive intelligence professionals. Its powerful clustering tool is also very relevant when processing a large amount of data. The recent acquisition of Cipher by LexisNexis is a good indicator of the development potential of this software and the relevance of its technology.

- User-friendly interface
- Powerful AI-powered clustering algorithms
- Infographics to visualize data



Lack of French-language support

Limited patent database (only 44 millions)



Mynd is a context mining platform. It applies an in-house developed topic modeling engine on textual data from any possible data source. Unsupervised analysis of massive amount of documents results in unbiased insights and the discovery of the unknowns.

Launch Year	2022
Interface Language	English
Price	Between \$120 and \$360 per year per user.
Data	No patent databases are provided natively with the software. However, Mynd claims to have access to over 120 patent databases worldwide (through their partners), covering millions of patents and applications. The company also offers customized data solutions to meet specific needs.
Al Technology	Mynd uses artificial intelligence (unsupervised context mining) to improve the efficiency and accuracy of patent search and analysis. Its AI algorithms can identify key concepts and relationships in patent data, making it easier for users to identify potential opportunities and risks.
Customer reference	n/a



Results relevance

Customer Service & Documentation

Mynd has (reportedly) a user-friendly interface that makes it easy for users to search and analyze data. The software also offers advanced search options and filters to help users find relevant information quickly.

Given its particularities, Mynd could not be tested in the same way as the other softwares. However, its AI algorithms can be of some interest in identifying key concepts and relationships in patent data, making it easier for users to identify potential opportunities and risks.

No available online documentation

Mynd customer service never answered our emails and no external data was found about the quality of its support service

Test results	User reviews	External benchmarks	
n/a	n/a	n/a	



The limited information available on Mynd and the company's short history make it difficult to evaluate the software being offered. However, given the fact that Mynd is not primarily a tool specializing in patent research, it seems to us to be a complementary tool for members of the CFIB.





Focus is a patent analytics tool that uses deep learning models to find all patents related to a certain domain, automatically categorize them into tailor-made taxonomies, and provide its users with deep insights that enable decision making.

	Launch Year	2021
	Interface Language	English
	Price	n/a
	Data	More than 128 million patents worldwide Bibliographic data for 98 countries / Full text for 38 countries
	AI Technology	Focus uses semi-supervised deep learning to mine any scope of patents, using AI classifiers defined by its users. Users teach the deep learning models with the domain expertise by simply labeling positive and negative examples or uploading them in bulk. Focus learns from the examples and can be let loose on any scope of patents.
	Customer reference	Danone, Philips, Rouse, America's Navy, Suez, GRT Gaz, Alcomex Springs, Reckitt, TUDelft



Results relevance

Customer Service & Documentation

Focus interface is (reportedly) simple and easy to use for any people with a basic understanding of the target technology. Focus finds all patents in the competitive environment without ever creating a single search string.

Focus provides actionable intelligence rather than just data, and does most of the analysis for its users to give them deep insights that help them make decisions. According to its website, Focus tends to finds 2-5 times more relevant patents than Boolean search. Focus' scores is supposed to predict real-life outcomes, such as whether a patent is likely to lapse within 4, 8, 12, or after 20 years, and whether a patent is so strong that is likely to be used in litigation if necessary. The software si supposed to predict which outcome a patent will have in 80% of all cases.

- No available online documentation
- Focus customer service never answered our emails and no external data was found about the quality of its support service



FINDEST Findest is a search engine for patents and scientific literature. It is a semantic search engine that allows users to search for relevant patents and scientific literature using natural language queries.

	Launch Year	2016
	Interface Language	English, French
	Price	n/a
	Data	Over 20 million patents Over 150 countries, including all of Europe, most of Asia, and all of America
	Al Technology	Findest's AI is a semantic search engine that uses natural language queries to identify relevant patents and scientific literature. The AI uses advanced algorithms to analyze millions of documents in all industries, and it combines science, patent, and business websites. The algorithm performs an automated extraction to find key intelligence parameters such as technical requirements, assignees, and affiliations. Finally, it creates reports that summarize key information and facilitate decision-making.
AINT-ETIEN CHOOL OF	Customer reference	ABB, BASF, Canon, Clariant, Decathlon, Philips, Heinz, Philips, Unilever, Shell, Heineken, Engie, ABinBev, BMVV, Dunlop, Evonik

FINDEST User Experience

Results relevance

Customer Service & Documentation

The interface is intuitive and easy to use, with advanced search options that the AI can adapt to.

The results of our tests were not relevant but the underlying AI technology can be powerful if trained correctly.

- The quality of the case study documents available is very precise and gives a good overview of the type of results and studies that clients can expect.
- The quality of the customer service is excellent, and the sales representatives are very professional and clear in their responses.



Overall Assessment

SAINT-ETIENNE SCHOOL OF ECONOMICS Findest can be a useful tool for patent research professionals who want accurate and relevant results for specific case studies. However, it may not be ideal for everyday use for generic searches for non-experts, as the software needs to be properly trained.

- Intuitive and easy-to-use interface
- Advanced search options and filters
- Natural language search capabilities
- Offers synonyms to refine searches



- high level of expertise needed in the field for an optimal use
- Only 20 million patents in the database

IPRally is a cloud-based patent search and analytics software designed for patent professionals, attorneys, and inventors. It provides users with advanced search capabilities, analytics tools, and a collaborative workspace to manage their patent-related workflows efficiently.

	Launch Year	2018
	Interface Language	Multilingual
	Price	Starting from €3,000 per year
	Data	95 million patents, covering several countries and regions worldwide, including Australia, Canada, China, European Patent Office, France, Germany, Japan, Republic of Korea, Spain, United Kingdom, and United States.
	Al Technology	IPRally uses artificial intelligence (AI), Graph technologies and natural language processing (NLP) technologies to provide users with advanced search capabilities and analytics tools. The software uses machine learning algorithms to analyze patent documents and extract relevant information, such as keywords, patent classifications, and citations.
	Customer reference	Siemens, Saint Gobain, DeLaval, Elkem, Sartorius, RPX, IQM, Foley, PRH, ABB, Nvidia, Dolby, Bentley, Kongsberg, Epiroc, Evalueserve, Fresenius
ETIEN	NE	

Results relevance

Customer Service & Documentation

The interfaces of IPRally are intuitive and easy to use, and users have access to information quickly.

The software provides relevant and transparent results that explain how the Al understands the user's technology and the state of the art. The results are sorted by relevance, and the algorithm considers several factors, such as the number of citations, the quality and quantity of the information provided, the source of the document, and the search terms used.

IPRally provides excellent customer support, including email and phone support. The software also has a comprehensive help center with user guides, video tutorials, and FAQs to help users with their patent-related workflows (which can sometimes be complex and too extensive)



Overall Assessment

- IPRally

IPRally is a useful tool for patent research professionals, offering several benefits, such as graphical interface, and quick search results. However, it requires users to have graph knowledge to optimize searches. The software has positive reviews from users, and it is recommended for patent research professionals.

- Graphical interface
- Quick search results
- Possibility to export results in various formats
- Relevant and transparent results
- Supports multiple languages

- Requires graph knowledge to optimize searches
- Documentation is complex
- Limited coverage of countries and time periods



lpscreener is a next-generation AI tool that allows users to explore and understand the hidden knowledge in patents. With Ipscreener, users can get an instant dashboard of the innovation landscape, including information on similar solutions, active competitors, and global trends. The tool adjusts dynamically based on the user's specific area of interest.

Launch Year	2015
Interface Language	English
Price	Entrepreneur : 29 euros/month Start up : 99 euros/month SME / pilot : 299 euros/month Corporate (+250 employees): Custom Plan
Data	Over 100 million patents from over 100 countries (time coverage over 30 years)
Al Technology	Ipscreener is an AI-powered tool that uses natural language processing (NLP) algorithms to extract relevant information from patent data. The tool adjusts dynamically based on the user's specific area of interest, and it offers personalized results. Ipscreener leverages artificial intelligence to provide advanced analytics, clustering, and categorization of patent data, improving the accuracy and efficiency of patent searches.
Customer reference	Danfoss, Electrolux, Hewlett Packard, Philips, Novartis, Rockwood, Unified Patents, Global Prior Art, Open Covid Pledge



Results relevance

Customer Service & Documentation

lpscreener's interface is user-friendly and customizable, allowing users to quickly navigate through the software and tailor their searches to fit their needs.

Ipscreener provides highly relevant and accurate search results, with a high degree of precision and recall. The software also includes powerful analytics tools to extract valuable insights from the patent data.

In 2018, Ipscreener was ranked n°I by the Austrian Patent Office among 7 text-based tools. Users report that Ipscreener provides accurate and relevant results, and that the tool is useful for validating ideas, minimizing legal problems, and supporting business decisions.

The quality of support and documentation for lpscreener is good. IPScreener offers customer support via email and phone and it provides detailed documentation on its website.



Overall Assessment

lpscreener offers advanced search and analytics capabilities that streamline the patent search process. Users report that lpscreener provides accurate and relevant results, and that the tool is useful for validating ideas, minimizing legal problems and supporting business decisions.

- Quality of search results
- Automatic updates feature
- Advanced search and analytics tools, including Al-driven features
- User-friendly interface that can be customized to fit user needs
- Excellent customer support

- Requires graph knowledge to optimize searches
- Documentation is complex
- Limited coverage of countries and time periods



Orbit Intelligence

Orbit is an intellectual property intelligence tool dedicated to patent research and analysis. It offers access to the largest and most accurate patent and scientific literature database. It features a new classification technology based on assisted machine learning to distinguish between relevant and non-relevant data and create graphs only from relevant documents.

Launch Year	1978
Interface Language	English, French, Chinese, German
Price	Orbit offers different pricing plans (starting from 1000\$ per year for basic plans and limited access) depending on the user's needs.
Data	Orbit has a database of over 110 million patents and patent applications from over 100 countries, with coverage dating back to the 19th century.
AI Technology	Orbit uses advanced AI and machine learning algorithms to improve the accuracy and relevance of search results, as well as to provide suggestions for related or similar patents. The software's AI capabilities enable users to perform advanced searches, analyze data, and generate reports quickly and accurately.
Customer reference	As a leader in the field, Orbit/Questel has more than 100000 users in the biggest companies and organizations in the world.



Results relevance

Customer Service & Documentation

The user interface is user-friendly and intuitive, with a variety of tools and features to make the patent research process easier and more efficient.

The search results are comprehensive and relevant, with a variety of filters and sorting options to help users quickly identify the most relevant patents for their research.

The quality of support and documentation is highly ranked, with users able to access a range of online resources and customer support

 Test results
 User reviews
 External benchmarks

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Overall Assessment

Orbit Intelligence

Being the most used software in the french speaking community, Orbit is a valuable tool for patent research professionals, offering many benefits, including advanced search capabilities, accurate and high-quality data, and user-friendly software. However, it may not be suitable for users who require more customized or specialized research solutions.





ResoluteAl is an artificial intelligence (Al)-based research and analysis platform that assists users in exploring scientific, technological, regulatory, and business data.

Launch Year	. 2015
Interface Language	English
Price	For the "Nebula" package: 25 000 \$ per year for 5 users 40 000 \$ per year for 10 users
Data	80 million patents from 120 countries From 1850 to 2023
AI Technology	The underlying technology of ResoluteAI is based on machine learning and natural language processing (NLP).
Customer reference	Aditx Therapeutics, Syngenta, Scott Channell



Results relevance

Easy and intuitive usage, integrated and interactive analytics that allow for quick access to related patents.

As we were not given a full access to the software, ResoluteAl could not be tested in the same way as the other softwares (demo session with the editor with only partial results to the test). However, user reviews are very positive about the relevance of the results obtained.

The documentation and the customers service are very effective and accurate.

Customer Service & Documentation

 Test results
 User reviews
 External benchmarks

 n/a
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Overall Assessment

connect to discover

ResoluteAl software can be useful for patent search specialists by allowing them to conduct simultaneous searches across multiple scientific, regulatory, and business databases, thus facilitating the discovery of new insights. Furthermore, with its integrated analytics and interactive visualizations, it helps users identify trends and understand relationships between patents more deeply.





CHOOL OF

Averbis is a software solution that uses artificial intelligence, text mining, and machine learning to analyze unstructured data for process optimization, research, and automation of cognitive tasks. Patent Monitor is its specialized counterpart in the field of patent search.

Launch Year	2007
Interface Language	English, German
Price	From \$100,000/year/server (Averbis) Patent Monitor: n/a
Data	I 19 million patents from 90 countries
Al Technology	This AI-based solution allows you to automatically classify large quantities of patents into user-specific categories and assess their relevance for your company. Users have the option of importing results as an Excel spreadsheet, displaying the data on Tableau in clear graphs, or viewing individual patents in Patent Monitor.
Customer reference	Cerner, TriNetX, CGM, NaviHealth, Krebsregister, Universitätsklinnikum Freiburg, Universitätsklinikum Erlangen, LMU, Medizinische Universität Graz, Medizin Informatik Initiative, IQVIA, Merck, Roche, Bayer, Syngenta.

Results relevance

The navigation is smooth but the search requires a true mastery of the field and a well-defined research plan because it involves entering specific information. It is not very intuitive because it goes through multiple sources and depends on the category of patents being searched and the various search criteria. Additionally, the software allows for the classification of patents based on their relevance, hence the importance of mastering the subject.

Given its particularities, Patent Monitor / Averbis could not be tested in the same way as the other softwares. However, its editor indicates that Patent Monitor reduces by 90% the manual effort for identifying relevant documents.

Customer Service & Documentation

The quality of the documentation and the customer service are praised by all their customers..

Test results n/a User reviews

External benchmarks n/a

Overall Assessment

averbis

text analytics

Averbis is tailored for healthcare professionals, providing text mining and machine learning solutions for unstructured data analysis in this field.





- Specialized focus on the health sector, offering tailored text mining and machine learning solutions for unstructured data analysis.
- Effective patent classification system using machine learning, allowing users to easily categorize patents based on their relevance.



- The search functionality is not very intuitive, requiring a deep understanding of the domain and specific input information for accurate results.
- Lack of built-in patent family grouping and other indexing tools, which might limit the software's efficiency in organizing and filtering patent data.

🔶 patsnap

Eureka is an Al-powered research platform for patents and intellectual property. It provides an alternative to Boolean search methods to find the most relevant results based on a keyword or paragraph of text in just a few seconds. Its AI capabilities allow it to extract technical information from patents, making it easier for R&D professionals to analyze and find technical information in a fraction of the time.

Launch Year	2022
Interface Language	English, Chinese
Price	\$20,000-\$30,000/year for SMEs \$5,000/year for startups with limited usage \$500,000/year for large enterprises
Data	170 million patents in 164 countries Time coverage not specified
Al Technology	Eureka's AI capabilities include semantic search and the ability to search for patents or literature related to a portion of provided text. Users can either copy and paste a body of text or write their own. For optimal results, it is recommended to write a text of at least 200 words. This search will provide the 100 most relevant results based on the text. Eureka also allows for image search to find patents related to designs or utility models.
Customer reference	Tesla, Dyson, Colgate-Palmolive, GW pharmaceuticals, University of Oxford, Walt Disney

patsnap User Experience

The interface allows for direct and easy access to the search function with results presented under the patented product name, including patent status, a brief description, images of the product, date of application, and patent holder. The search interface is user-friendly and includes additional features such as the ability to describe an idea, track competitors, and access personalized roadmaps. The presentation of results is simple and powerful, allowing for easy access to necessary information and the ability to search not only patents but also literature.

Patsnap's AI system can understand the meaning of the search and prioritize the most relevant searches. A user review in a pharmaceutical context stated that Patsnap is a very powerful tool and displays directly the patents searched for. It also offers the ability to find similar products to those for which one anticipates filing patents.

Good technnical documentation Ineffective customer support

User reviews

External benchmarks

n/a

Overall Assessment

Overall, Eureka is a powerful and user-friendly tool for patent searching, particularly for researchers in the pharmaceutical and biotech industries. Its semantic search capability and Al-driven features, such as image searching and automatic technical summaries, make it quick and efficient to find relevant patents.



User-friendly

Results relevance

Test results

Customer Service & Documentation

- Tailored for researchers in pharmaceutical and biotech industries
- Effective AI-drivenn features



- The system displays patent codes according to the country code rather than the WIPO code ,which can make it difficult to navigate
- Some users have reported that the customer service is ineffective and unresponsive.





Octimine is a web-based patent analytics tool that uses artificial intelligence and machine learning algorithms to provide users with patent search, analysis, and visualization capabilities. It can help users gain insights into patent portfolios, technology trends, and competitor activity.

	Launch Year	2012
	Interface Language	English
	Price	Octimine offers various pricing plans, including a basic plan starting at €299/month, a professional plan starting at €599/month, and a custom plan for enterprise users. They also offer a free trial.
	Data	150 million patents from over 100 patent offices worldwide. They cover over100 countries and provide data dating back to the 19th century.
	Al Technology	Octimine uses advanced AI and machine learning algorithms to provide users with accurate and relevant patent search results. It also offers automated patent categorization and clustering, as well as predictive analytics capabilities. It also has a new beta option called "Landscape," which allows for analyzing a larger amount of patent data to understand models and trends.
	Customer reference	Octimine claims 15000 users in the world, that include big publicly listed companies, as well as small and medium enterprises, patent attorneys, patent engineers as well as patent offices.



Results relevance

Customer Service & Documentation

Octimine has a user-friendly interface that is easy to navigate. It offers customizable dashboards and reports that allow users to easily visualize and analyze patent data.

Octimine's search results are comprehensive, accurate, and up-to-date. Users can also analyze and visualize the results to gain insights into technology trends and competitor activity. Octimine search capabilities are supposed to increase search quality up to 70%.

Octimine provides excellent customer support through email, phone, and live chat. They also offer extensive documentation and training materials to help users get the most out of the software.

Test results

User reviews

External benchmarks

Overall Assessment

Octimine is a highly useful tool for patent researchers and professionals, that offers comprehensive results, powerful AI algorithms and effective visualization tools, within a user-friendly interface.

- Patent Database
 Customizable dashboards
 - Powerful AI algorithms that provide accurate and relevant results

High priceLimited language support





PatentPak is a specialized software designed for hard sciences such as chemistry and biology. It provides functionalities for searching information on chemistry, biology, and related subjects. Key features include searching scientific documents and patents, chemical products, chemical reactions, organic and inorganic substances, CAS Registry Numbers, industrial patents, commercial suppliers, physico-chemical data, experimental results, analysis tools, structure visualization tools, biosequence search, and relevance ranking.

Launch Year	2016
Interface Language	Multi-language, with patents available in their original language and most translated into English
Price	n/a
Data	 18 million full-text patents and 37 million bibliographic references (journals, and other scientific literature documents) 63 countries covered since 1961
Al Technology	PatentPak utilizes AI for discovering compounds in patents instantly, determining patentability of research structures, optimizing and predicting compound synthesis, providing comprehensive chemical and biological data, and identifying the most relevant references for research.
Customer reference	University of Aix-Marseille



	User Experience	The interface is modern, easy to use, and efficient, offering a high-quality user experience
Demos		The software is popular among scientists, particularly in the field of chemistry. The materia
A CAS SOLUTION		design allows for easy navigation and visualization.
	Results relevance	The algorithm is efficient and the obtained results have a great accuracy, according t
		Patentpak's users.
	Customer Service & Documentation	The online technical documentation is extensive and regularly updated by the publishe
		Numerous videos are also available for learning how to use the tool. However, the quality o customer service may not be optimal, based on the response time.
	Test results	User reviews External benchmarks
	nla	nla nla
	[]/a	
2		
Overall	PatentPak is a pioneer in scient	tific patent monitoring tools, offering numerous high-performance features, a
Overall Assessment	PatentPak is a pioneer in scient high-quality search algorithm, an	tific patent monitoring tools, offering numerous high-performance features, a d a simple and clean design, devoted to biology and chemistry.
Overall Assessment	PatentPak is a pioneer in scient high-quality search algorithm, an	tific patent monitoring tools, offering numerous high-performance features, a d a simple and clean design, devoted to biology and chemistry.
Overall Assessment	PatentPak is a pioneer in scient high-quality search algorithm, an • Specialized in hard sciences such as chemistry and bid	tific patent monitoring tools, offering numerous high-performance features, a d a simple and clean design, devoted to biology and chemistry.
Overall Assessment	 PatentPak is a pioneer in scient high-quality search algorithm, an Specialized in hard sciences such as chemistry and bid Comprehensive search functionalities Madarn upon friendly interface 	tific patent monitoring tools, offering numerous high-performance features, a d a simple and clean design, devoted to biology and chemistry.
Overall Assessment	 PatentPak is a pioneer in scient high-quality search algorithm, an Specialized in hard sciences such as chemistry and bid Comprehensive search functionalities Modern, user-friendly interface Efficient Al features 	tific patent monitoring tools, offering numerous high-performance features, a d a simple and clean design, devoted to biology and chemistry.
Overall Assessment	 PatentPak is a pioneer in scient high-quality search algorithm, an Specialized in hard sciences such as chemistry and bid Comprehensive search functionalities Modern, user-friendly interface Efficient Al features Access to extensive data from multiple databases 	tific patent monitoring tools, offering numerous high-performance features, a d a simple and clean design, devoted to biology and chemistry.



Derwent^{*}

Derwent Innovation is a patent research platform that provides patent information and data to its users. It features patent analysis, searching and tracking, access to historical data, patent monitoring and alerts, and analysis and visualization capabilities. The AI capabilities include machine learning algorithms and natural language processing systems for patent analysis, as well as advanced multi-criteria search and mapping functions for patent analysis.

Launch Year	2016
Interface Language	English, French, German, Spanish, Japanese, Chinese
Price	Prices start from \$500 per year for an annual subscription and from \$50 per month for a monthly subscription.
Data	170 million documents from over 80 countries From the 1790s to present
Al Technology	Derwent Innovation uses machine learning algorithms and natural language processing systems for patent analysis. It also offers advanced multi-criteria search and mapping features for patent analysis.
Customer reference	Government and academic bodies, life sciences companies, corporations, and law firms





XLPat by XLScout is an innovative patent search and analytics tool that leverages AI, NLP, Watson, and SALSCOUT search intelligence technologies to provide patent professionals with intuitive search capabilities, insightful visualizations, and robust analysis features.

Launch Year	2016
Interface Language	English
Price	n/a
Data	Over 150 million patents and 200 million publications Coverage of over 100 countries
	Temporal coverage extending back to the early 20th century
AI Technology	NLP and AI-driven search algorithms for more relevant and accurate results
	IBM Watson integration for advanced analytics and insights
	Search intelligence for auto-categorization and clustering of search results
Customer reference	John Deere, Yamaha, Osram, Kass, IIT Kanpur, IIT Madras, Fraunhofer, Finnegan, I-
	Dair, Honda, Mitsudishi, Sumitomo, NTT, Mani



xlscout

Results relevance

Customer Service & Documentation

XLPat offers a user-friendly interface with easily accessible features, allowing users to perform efficient and targeted patent searches, analyze results, and generate reports. Users have praised the platform for enabling teamwork and streamlining their IP strategy.

XLPat delivers high-quality results with its advanced search features, allowing users to find relevant patents quickly and efficiently while minimizing false positives. Users have commended the clarity and ease of understanding of the generated reports.

XLPat offers comprehensive support through their customer service, online documentation, and dedicated account managers who provide personalized assistance and training. Users have reported high satisfaction with the quality and efficiency of the technical support.

Test results n/a User reviews

External benchmarks

Overall Assessment

XLPat is a valuable tool for patent research professionals due to its Al-driven search capabilities, extensive patent database, and user-friendly interface.

- 0
- Comprehensive patent coverage
- Al-assisted search and analysis features, including NLP and IBM Watson integration
- Intuitive and user-friendly interface
- Robust analytics and visualization capabilities
- Dedicated support and training
- Positive user reviews highlighting effective collaboration features and high-quality reports

Limited language support for the interface
No French-speaking customer support



METHOD: BENCHMARKS

Hafner, Ana, Damij, Nadja and Modic, Dolores (2022) Augmented intelligence for state-of-the-art patent search. In: 2022 IEEE Technology and Engineering Management Conference (TEMSCON EUROPE). IEEE, Piscataway, US, pp. 61-66. ISBN 9781665483148, 9781665483131

K. Loibner Assessing the Performance of Semantic Search Engines <u>https://rospatent.gov.ru/content/uploadfiles/presentations/ip-digital/loibner_24042019.pdf</u>

Burkhard Schlecter (2021) Comparison of Automated Search Engines in the Patent Domain; Performance and Analysis https://www.ml4patents.com/blog-posts/comparison-of-automated-search-engines-in-the-patent-domain-performance-and-analysis-2

Jürgens, Björn & Clarke, Nigel. (2018). Study and comparison of the unique selling propositions (USPs) of free-to-use multinational patent search systems. World Patent Information. 52. 10.1016/j.wpi.2018.01.001.

