Artificial Researcher

NEXT GENERATION SEARCH TECHNOLOGY
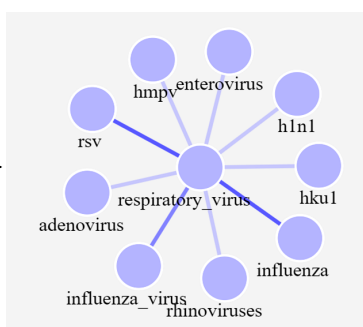
FOR ANY TYPE OF MACHINE-READABLE TEXT-BASED COLLECTION

We believe scientific literature, technology and data should be findable to **everyone**
and not just to those who know where to look and how to search.

PAST: Library Card System

TODAY: Terms and related concept represented as graphs

Automatic Query Formulation with
Transparent AI
(adenovirus OR adv OR enterovirus OR h1n1 OR hku1 OR hmpv OR influenza OR rhinovirus OR rhinoviruses OR rsv) OR ("respiratory virus"~4 OR "influenza virus"~4)

Concepts extracted from the collections
Coinfections with other respiratory viruses such as RSV , adenovirus , or the influenza A or B viruses are often associated with influenza C virus infection

OPEN ACCESS AND OPEN SCIENCE are an ongoing effort to encourage researchers to publish Open Access and make their research data set available for others. One of the strongest incentives to researchers is visibility in terms of publication citations and data citations. However, since 2013 every few seconds a new scientific paper is published somewhere in the world[1].

Researchers' publications and datasets need to be findable among the vast amount of publications. Artificial Researcher (AR) supports the Universities and Public Research Organisations to address the **F** from the **FAIR**[2] principles. We connect meta-data keywords to the full-text content via domain-specific ontologies generated from the collections. Essential to increase the visibility of the researchers' works is to measure the effort of the findability strategy.

We examine citation impact (data and publications), conduct scientific citation sentiment analysis, and measure the richness of the meta-data that accompanies texts.

Furthermore, AR helps research organisations increase their Technical Awareness (TA) levels. TA is part of the mission declaration for Universities and Public Research Organisations to foster innovation technology. TA is a central concept to the Technical Readiness Level (TRL). To measure TRL one has to detect the maturity of a technology within a scientific field by looking at research data and patents in an integrated way. AR helps researchers with solutions for technical discovery (TRL1) and prior art search (TRL2)

In 2018 alone, €110 Billion was spent on R&D at Public Research Organisation and Universities in Europe[3].

* Does your organisation support you in making your work findable?

* Is the findability effort measured correctly in your institution?

* Does your organisation invest in increasing the Technical Awareness of its members?

* How efficient is your organisation in transferring R&D results into patents, licenses, commercial products?

1: https://www.sciencemag.org/site/special/scicomm/infographic.jpg
2: "FAIR data" stands for Findable, Accessible, Interoperable, Reproducible data, https://www.go-fair.org/fair-principles/
3: https://anchor.fm/european-patent-office/episodes/Valorisation-of-scientific-results--patent-commercialisation-scoreboard-European-universities-and-PROs-eo41hj/a-a46iv2g - we need here the title of the podcast and the minute+second where that statement is made.

WHAT WE DO

With Artificial Researcher customized services and software we offer a market advantage to universities and industrial stake-holders who want to be leaders in innovation and be the driving force of new technology. The AR services and software, provide a sustainable holistic approach AI-based text mining solution to both academia industry. AR addresses the F from the FAIR that data are searchable and easy to find. We have added a prefix i to FAIR, iFAIR. The i stands for identification in full-text and linking to Meta-data. Findable research outputs rely on rich machine-readable meta-data which uniquely identifies a particular data. Our findability assessments include meta-data, publications full-text, citation sentiment and impact of publications and associated data.

We apply a fair pricing model taking into the account that search information is essential for optimize deep learning algorithm.

TECHNOLOGY

With our services we generate domain-specific ontologies and indices on client's data as well as on Open Access publications and patents. We offer both cloud service access and on-premises software, which can integrate inhouse scientific reports, closed access publications etc. We have a modular software architecture which allows for continuous improvement releases, technology quality, and transparency to our clients. Two of our key components are Automatic Query Expansion with understandable semantic information (AI transparency) and Dataset Name Discovery related to different scientific fields. Our search technology gives researchers several search alternatives Meta-data, full-text search text-box and Graph Search. Our novel Graph Search Service, is based on domain-specific terminology and is directly linked to text paragraphs for easy access. By collaborating with us your organisation reduces cost for development, for data acquisition and curating as well as maintenance.

CHECK OUT OUR SHOWCASES

⇒ Artificial Researcher Passage Retrieval Service, (link for developers and demo)

⇒ Artificial Researcher Ontology Service, (link for developer and demo)

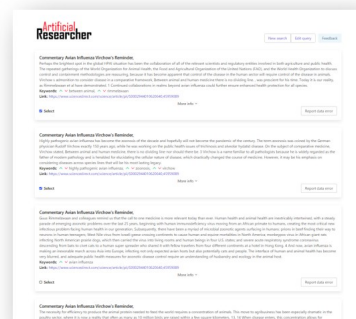⇒ We are GDPR compliant, we decided to not collect user information via cookies or analytic tools, therefore for testing please use demo API key <68aa941f22db42d6a4cf4d1cb2babe76>

Graph Search & Text Box Search
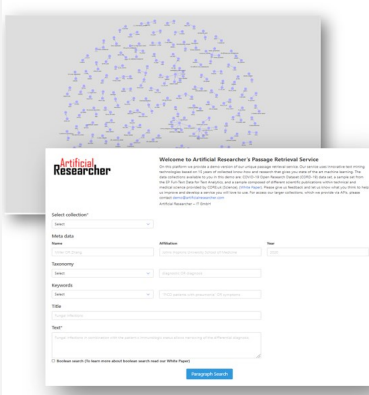
Our search software generate the query in the specific domain
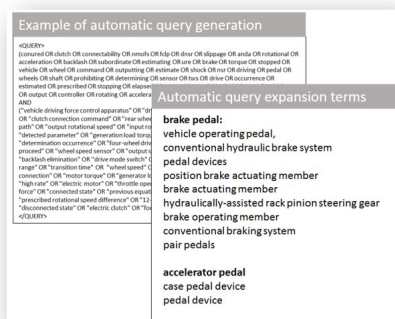
Retrieves relevant paragraphs

WE COMBINE OUR EXPERTISE

Artificial Researcher is a spin-off based on Mrs Linda Andersson PhD research at TU Wien was founded in 2019. We are four female founders, a team of developers and a pool of annotators. We are specialists in developing novel and innovative cross-genre scientific text mining systems tailored to the needs of students, researchers and information search professionals. Contact our CEO Linda Andersson (Linda.Andersson@artificialresearcher.com)

www.artificialresearcher.com
www.ml4patents.com
LinkedIn

Artificial Researcher IT GmbH
Taubstummengasse 11 (i2c),
1040, Wien Austria

Scientific Knowledge Services (www.knowledge.services) is a company which specializes in helping the European research organisations to embrace new technologies and ways of working. The company runs since 2015 a successful series of workshops in partnership with UCL Press and LIBER Europe - *Focus On Open Science*. Its ambitious and hard-working team helps research organizations, libraries, and publishers to develop modern science communication programs, nurture communities or research practice, develop citizen science programs and it offers consultancy for a transition to Open Science practices.

PatentSemTech 2021

Workshop Series on Patent Text Mining and Semantic Technologies

We would like to take the opportunity to introduce "Patent Text mining and Semantic Technologies" PatentSemTech'21 workshop on the 15th July. This is the second edition of the PatentSemTech workshop and will be held as a full-day online event in conjunction with SIGIR 2021. This year the workshop organizers are FIZ Karlsruhe, Artificial Researcher IT GmbH, Research Studio DSc, TU Wien, Hasso Plattner Institut, Carnegie Mellon University.

The PatentSemTech'21 will be a full-day event with research paper presentations, keynote speakers, panel discussion "Artificial Intelligence and Patent Analysis: Friends or Foes?" with invited speakers from patent institutes, universities and industry. There will be a demo session presenting academic, start-up and open-source IP text mining tools.

This year we are honoured to have Prof. Noriko Kando and Prof. Osmat Jefferson as keynote speakers, both with background in Library and Information Science.

Prof. Noriko Kando Ph.D in Library and Information Science, is a professor in the Information-society Research Division of the National Institute of Informatics (NII), Tokyo, Japan and has been co-appointed as a professor in the Department of Informatics at the Graduate University of Advanced Studies, Japan. She is one of the NTCIR project initiators, which is an established venue for research in Information Access. Back in 2001, she introduced patent retrieval to the Information Retrieval (IR) research community, and since then Kando has been the main designer of many and various retrieval tasks: cross-lingual IR, opinion analysis, complex question answering, community Q&A, geo-time search.

Prof. Osmat Jefferson PhD in MInt Law, Omsat is a professor at the Faculty of Science, School of Information Systems, Queensland University of Technology (QUT). In the past thirty or so years of her professional life, Osmat was a schoolteacher, a desk librarian, a first aid volunteer in war zones, a research and lab leader, a business owner, and a research professor. As the Director of Product Development, Cambia, Osmat now leads the development of products at Lens.org, an open and global platform designed to render science-and technology-enabled problem solving more effective, efficient and inclusive.

The PatentSemTech workshop series aims to establish a long-term collaboration and a two-way communication channel between the Intellectual Property industry and academia from relevant fields such as Natural Language Processing, Text and Data Mining and Semantic Technologies to explore and transfer new knowledge, methods and technologies for the benefit of industrial applications as well as support research in applied sciences for the IP and neighbouring domains.

To keep up to date with the news about this workshop and new data collection releases you can subscribe to the following mailing list: patentsemtech-info@list.tuwien.ac.at