



kinit

2023

Report





JOIN US

Why partner with KInIT?

- Help Slovakia to concentrate and circulate talents
- Discover solutions for your problems using Artificial Intelligence (AI)
- Get a new perspective on your R&D&I
- Collaborate in excellent research
- Improve knowledge of your employees on selected topics of AI

We also offer several opportunities

- for collaboration with innovative companies and academic institutions,
- to match basic and applied research with the needs of the intelligent technology industry,
- with particular focus in artificial intelligence and several domains of computer science with outreach into other disciplines.

Get in touch!

Help us to concentrate talents in Slovakia, achieve excellent basic and applied research based on responsibility, ethics and economic sustainability.

partnerships@kinit.sk



Dear Partners and Friends,

It is my great pleasure to present the results of our efforts, activities and successes during the 2023 year. Establishing a recognized research institute in the Central European Region is a fascinating adventure. Each year brings us new challenges, as we grow and become more recognized in Slovakia and in the wider European region.

In 2023 we have expanded all our activities. There are two core drivers for the growth - success in the European grants, and the industry research collaborations. Last year was the year of implementation of the grants awarded. Setting up the project office and effective implementation of grants was a major challenge. We have also attracted seven new industry-driven research collaborations.

The major pillar for the vision of an excellent research institute is international research cooperation. Thanks to the European grants, we have extended our international research network to 25 countries. We have also increased our visibility in premier scientific forums, including esteemed A* ranked conferences and journals.

International recognition also helped in our effort to scale the institute. I am proud that we have advanced to the 2nd stage of the highly competitive Horizon Europe Teaming for Excellence scheme, which not only acknowledges our vision for the KInIT to be inline with the wider EU strategy, but also helped in setting the vision of KInIT development in 10+ years.

We significantly increased our media appearance last year also due to our proactive approach to the spread of ChatGPT and other tools based on Large Language Models. Our researchers were mentioned 150+ times in the media. We continued in co-organizing Better_AI meetups, which have grown in popularity.

In the name of the KInIT, I would like to personally thank our partners, donors, and supporters. We are honoured by the Slovak Academy of Sciences joining KInIT as an associated member. We were pleased by 18 supporters (private companies) contributing to our basic research activities in 2023. Thanks to the donations we are able to deliver excellent research and increase our impact on society (nurturing young talents or taking part in AI discourse in society).



Maria Bielikova, *Director General*





People and Culture

As a research institute, we recognize that our people are our greatest asset. Fostering a creative environment that appeals to both young talents and experienced professionals is paramount to our success.

To reinforce our commitment to diversity, equity, and inclusion, over the past year we organised comprehensive training sessions and workshops for the entire institute. These initiatives aimed to raise awareness, foster understanding, and promote inclusive behaviours among our staff. Through these efforts, we strive to cultivate a workplace where every individual feels valued, respected, and empowered to contribute their unique perspectives and talents.

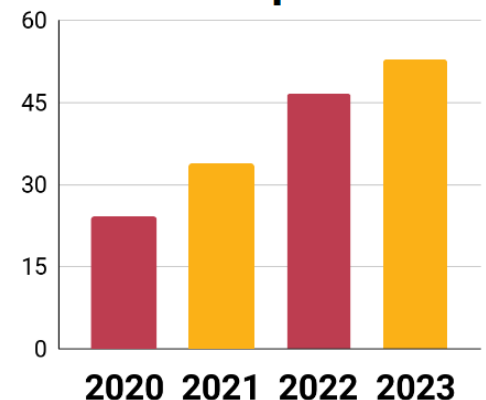
“As a research institute, we recognize that our people are our greatest asset.”

Furthermore, recognizing the importance of fair and equitable hiring practices, we conducted specialised workshops for our hiring managers. These workshops focused on ensuring fairness, transparency, and equal opportunities for all candidates throughout the selection process. By equipping our hiring managers with the necessary tools and knowledge, we aim to uphold our commitment to fairness and meritocracy in recruitment.

We are proud that as the first independent private research institute, we have successfully applied for the HRS4R certification (Human Resources Strategy for Researchers). This certification supports research institutions and funding organisations in implementing the principles outlined in the European Charter & Code for Researchers. By achieving this milestone, we reaffirm our dedication to excellence in human resources management and our commitment to providing a supportive and enriching environment for our researchers and staff.

KInIT's personnel capacity increased in 2023. Compared to 2020, when KInIT was established, the Full Time Equivalent (FTE) has more than doubled. At the end of 2023, the personnel capacity was 26,8 FTE researchers and engineers, 11 doctoral students, 10,85 FTE operations, 2,6 FTE R&D management. In addition in December 2023 we hosted 12 interns and collaborated with 5 volunteers.

Full Time Equivalent





2023 Results

In 2023 we have strengthened our team of researchers, engineers and experts in all segments of the business. In line with our strategy based on responsibility, moral integrity, and economic sustainability, supported by the team and individual growth leading to a culture of trust, openness, and respect, we have nurtured the excellence by:

- increasing the excellent scientific results through top-tier venues (A/A* conferences, Q1 journals);
- continuing our long-term and starting new industry collaborations, and launching the European digital innovation centre Hopero services;
- increasing the interest in AI research and creating pool of young talents by participating at university student's knowledge venues.



I. Excellent and responsible research

Aligned with the institute's strategic research direction, we have increased our visibility in premier scientific forums, including esteemed conferences and journals. This achievement is attributable not only to the exceptional researchers but also to the pertinence of our research topics and their direct societal impact. Notably, we take pride in securing acceptance for three publications at the EMNLP - Conference on Empirical Methods in Natural Language Processing 2023, where our emphasis on multilingual approaches and generative AI aimed at combatting disinformation.

In alignment with our commitment to fostering a culture of diversity, our researchers have actively cultivated collaboration across our research teams. This collaborative effort has significantly contributed to the elevation of research excellence within our organisation. More precisely, we remain dedicated to articulating and promoting responsible and trustworthy technologies. This dedication underscores our pledge to uphold ethical standards and ensure application of advancements, aligning with our values of inclusivity and excellence.

Throughout 2023, we strategically capitalised on the opportunities presented by the Recovery and Resilience Plan in Slovakia. Our teams actively engaged in the preparation and submission of ten grants under this program, leveraging its potential for positive impact. Simultaneously, we



maintained our commitment to securing competitive funds by submitting fifteen proposals under various European schemes, including Horizon Europe, Digital Europe, Interreg, and EMIF.

This dual-focused approach exemplifies our dedication to maximising available resources while actively pursuing diverse funding avenues to support our grants and initiatives. We have also advanced to the 2nd stage of the highly competitive Teaming for Excellence scheme of the Horizon Europe program, which acknowledges our vision for the KInIT to be inline with the wider EU strategy.

We are proud to have secured funding for five new research grants in addition to eleven ongoing grants.

Regarding the absolute value of funding gained from the Horizon Europe granting schemes, KInIT is ranked in the TOP10 institutions in Slovakia, which is an encouraging result (with the context of a number of employees and efficient operations).

An integral part of our work is international cooperation, which is a must for large research grants. We have again extended, already unique set of international research collaborators, namely: German Research Centre for Artificial Intelligence (DFKI), The Centre for Research & Technology, Hellas (CERTH), Adapt Center, Trinity College Dublin, University of Sheffield, or The Pennsylvania State University.

We are also pleased to cooperate with Slovak academia, namely Comenius University in Bratislava, Faculty of Mathematics, Physics and Informatics and Faculty of Social and Economic Sciences, Slovak Academy of Sciences, Institute of Philosophy or Technical University of Kosice, Faculty of Electrical Engineering and Informatics.

“ We have advanced to the 2nd stage of the Horizon Europe Teaming for Excellence scheme.

“ We are honoured by the Slovak Academy of Sciences joining KInIT as an associated member.

We have started three new international grants

The acquired and started grants cover different actions and aim at different goals. We have covered various schemes from Slovak Research and Development Agency (APVV), Visegrad fund to Horizon and Digital Europe. We have also covered a variety of topics such as detection of toxic behaviour in social media, moral and legal philosophy of intelligent technologies, identifying slants in online news platforms, supporting media professionals in trusted information production through AI and AI-based models for multilingual disinformation analysis. Moreover, we were successful in our application for the CEDMO 2.0 project (Digital Europe), which will start in May 2024.





New grants at a glance:

Modermed

Multimodal detection of toxic behaviour in social media

Project will focus not only on the detection of fake news and reviews, but also on new forms that are more difficult to detect by technical means, such as disinformation of various kinds, hoaxes, propaganda, and conspiracy theories. We will investigate the possibilities and methods of technical capture of mechanisms typical for the forms of antisocial behaviour.

Techne

Philosophical and methodological challenges of intelligent technologies

The project will set out to resolve timely challenges of intelligent technologies and consider notions that venture beyond single individuals and their backward-looking responsibility: collective culpability, vicarious liability, and forward-looking responsibility will be suggested as appropriate tools to overcome the above problems in moral and legal philosophy.

NSlant

Identifying and Measuring News Slant using Artificial Intelligence

Our aim is to apply different text mining methods to develop a new model of identifying slants in online news platforms and to analyse the narratives of influential domestic politicians related to the identified events. The project will address the issue of media freedom and bias with the help of text mining to promote resilience towards biased reporting.

AI-CODE

AI services for COntinuous trust in emerging Digital Environments

The project is aiming to research and develop novel generative AI based solutions dedicated to media professionals and thus support creation and dissemination of trustful and credible online content. It reflects on rapid technological advancement not only in the area of generative AI but also in next-generation social media, which are just around the corner.

ExU

AI Models for Examining Multilingual Disinformation Narratives and Understanding their Spread

The project is dedicated to developing AI based models specifically tailored for multilingual disinformation analysis. It focuses on tasks such as rumour stance classification and claim retrieval, directly relevant to the fact-checking. The project goes beyond existing approaches by incorporating various language families, especially relevant for the EU.

The institute's research and scientific approach combines excellence with a high societal impact, not just nationally but also internationally. Our focus has been on researching AI methods and models in four domains, namely green and secure environment, web and social media, natural language processing, and ethics and human values in technology.



Dissemination of scientific knowledge

In the course of 2023, our research endeavours resulted in the publication of a total of sixteen scientific papers. Notably, four of these papers were at A* level, three were classified at the A level, and one reached the B level, all through prominent international scientific conferences. Additionally, our contributions extended to scientific journals, where four papers achieved Q1 level and one attained Q2 level.

Reflecting our commitment to Open Science, we proudly made all eleven papers from international conferences and five from international journals publicly accessible. This transparent approach aligns with our dedication to sharing knowledge and fostering collaboration within the scientific community and the society.

Beyond these accomplishments, we actively engaged in communicating our perspectives on relevant regulations and technologies. Notably, we articulated our Stance on the regulation of Generative Artificial Intelligence. This multifaceted engagement underscores our commitment to advancing not only our research but also contributing to the broader discourse surrounding emerging technologies and regulatory frameworks.

Community support

We have consistently demonstrated unwavering support for the AI research community by actively contributing as steering, program, or organising committee members at esteemed conferences such as IJCAI, The Web Conf, ACL, EACL, SIGIR, Hypertext, RecSys, UMAP, ADBIS, ECML PKDD, or WSDM.

Furthermore, KInIT's researchers have served as reviewers for distinguished international journals, such as User Modeling and User-Adapted Interaction, New Review of Hypermedia and Multimedia, Journal of Intelligent Information Systems, Journal of Web Engineering, Transactions on Management Information Systems, Transactions on Computer-Human Interaction, Data Mining, Knowledge Discovery or Social Network Analysis and Mining.





II. Research & Innovation in Collaboration with Business

Research-industry partnerships are crucial for fostering innovation, driving economic growth, and addressing real-world challenges. Three years of industry collaborations brought us to acknowledge that successful industry collaborations are a win-win solution for both, our industry partners and us as a research institution. Our partners develop their businesses by gaining access to cutting-edge research outcomes and technology transfer initiatives. For our institute research-industry partnerships are crucial to dig deeper into our expertise, encouraging Slovak innovations and also gaining funding opportunities.

We managed to successfully continue our industry long-term collaborations and PhD projects (ESET, Luigi's box, sféra, Softec, and ZSEE). Although we consider stable partnerships very important, we thrive to establish new ones: in 2023 we started several new pilot industry corporations (Aspecta, AI Dental, Bencont, Martinus, Evolveum, ČSOB, SLSP and Zaraguza). Our pilots [R&D Industry projects](#) focused mostly on natural language processing solutions related to text classification, information extraction and text generation while long term collaborations solved tasks with forecasting, anomaly detection and optimization algorithms.

In a busy year, we launched the Hopero project, our European digital innovation centre despite initial setbacks caused by bureaucratic obstacles. At the end of the year, we managed to start offering Hopero services, which is in line with our goal of bringing cutting-edge science to companies in our region. The fundamental aspect is that we engage them in applied research activities that result in a better understanding of their capabilities and limitations, so we do not focus on product development. While the bureaucracy still presents challenges, we provide services according to the original commitment with the European Commission and bring the innovative potential of AI to Slovak SMEs.

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The use of AI opens the door to key ethical issues, such as the impact of AI systems on human autonomy, reliability, security and privacy. End of 2023 was fulfilled with preparation for the first year of [AI Awards](#): trustworthy AI in partnership with European Digital Innovation Hub Hopero and the Committee on Ethics and Regulation of Artificial Intelligence established by the Ministry of Investments, Regional Development and Informatization of the Slovak Republic. AI Awards recognizes organisations and their AI teams that develop and deploy their AI systems in a responsible manner, taking into account the principles of trustworthy and human-centric AI.





III. Talent Concentration and Circulation

Continuing our steadfast commitment to excellence research and bridging academia with business, our institute remains dedicated to advancing our PhD program, providing unparalleled opportunities for the growth and development leading to more aspiring researchers.

In alignment with our mission to foster innovation and cultivate talent, we also continue to offer engaging internships aimed at attracting young minds and supporting their future careers. Through these internships, we not only contribute to ongoing research endeavours but also nurture a passion for exploration and discovery, equipping interns with invaluable skills and experiences. Last year 5 new talents joined our team in intern positions.

As we look ahead to the future, we remain steadfast in our commitment to supporting talent circulation and empowering researchers at every stage of their careers. Therefore, we keep on strengthening our team with hiring international colleagues and interns.

We also set up an ecosystem to empower and attract seasoned senior researchers by applying to interesting international grants.

Brand, Media and Visibility

We consistently share our scientific endeavours with the wider community. KInIT reputation solidified through significant visibility in major Slovak media outlets and active participation in conferences and events. Our team members contributed to this growth in 2023 through numerous interviews, presentations, and panel discussions. The topics that resonated the most were large language models, regulation of AI and information quality and disorders. These engagements not only showcased our expertise but also reinforced KInIT's position as a thought leader in the field.

KInIT researchers were featured in the media 152 times, including interviews, podcasts, and television appearances. This marked an impressive 65% increase from the previous year, highlighting the growing recognition of our team's competence.

We were honoured to be invited to participate in prominent events such as Europe Day and European Researchers' Night, which attracted thousands of attendees. At these large-scale events, our team had the opportunity to showcase our research to diverse communities and to contribute to broader conversations about the impact of AI.

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We actively engaged in public discussions surrounding AI regulation, and other pressing societal issues. Our contributions extended to articulating our [stance on the regulation of Generative AI](#), reflecting our commitment to navigating the ethical and legal landscapes of emerging technologies responsibly.

We also sustained our collaboration with Innovatrics and other partners to organise impactful [Better AI meetups](#), providing a platform for AI professionals to exchange insights, share experiences, and foster valuable networking opportunities.

In 2023, our commitment to consistently engage our community with compelling information was evident as we maintained a daily presence on social media, effectively amplifying our reach. Notably, our efforts were met with substantial growth in our social media following, with a remarkable 20% increase on Facebook, a notable 31% surge on LinkedIn, and an impressive 88% expansion on Twitter. Additionally, our monthly newsletter remained a cornerstone of our communication strategy, maintaining an impressive average open rate of 48.67%.

These statistics underscore our dedication to fostering meaningful connections and expanding the accessibility of our scientific initiatives to diverse audiences.

Last but not least, our researcher Ivan Srba was among the finalists of the prestigious ESET Science Award in the category “Outstanding Scientist under the age of 35”, and our founder Mária Bieliková has been honoured with the prestigious award “Personality of International Cooperation” at the Slovak Scientist of the Year awards. She received this award for her unique contributions to the development and international visibility of Slovak science in the field of AI, her involvement in Horizon Europe scientific grants, and the establishment of the Kempelen Institute of Intelligent Technologies with international reach.

Finances

KInIT’s funding is built up along three main sources:

- (i) basic funding, which mainly support application driven basic research, people development and partially also operations, currently it consists mainly of donations,
- (ii) grants, which support KInIT’s core activities including interdisciplinary and cross-sectorial research and international networking, and
- (iii) industrial research collaborations, which focus mainly on applied research and transfer aimed at innovations.

The most substantial part of KInIT costs in 2023 was personnel expenses (85%). Part of the operational costs were financed by services provided at significant discount or pro bono, i.e., non-financial contributions (e.g., office spaces, leadership training, communication support, AI computing infrastructure). KInIT 2023 costs were 2.4 mil eur, compared to 1.7 mil eur in 2022.





On the income side, the share of basic funding continued its decrease compared to previous years, while the share of the income from grants significantly increased. As the institute grew on the year-on-year comparison, the share of donations representing basic funding dropped to 49.2% in 2023. The following table shows the share of revenue according to the three main sources of funding, taking into account only financial contributions.

| Income | 2021 | 2022 | 2023 |
|-------------------|-------|-------|-------|
| Basic Funding | 91.6% | 75.8% | 49.2% |
| Research Grants | 0.6% | 11.8% | 33.8% |
| Industry Research | 7.8% | 12.4% | 17% |

In 2023 KInIT maintained the share of revenues from industry collaborations at 17%. In absolute numbers the revenues rose by more than 81% year-on-year. In 2023 we were involved in 11 international grants and 5 national grants. This resulted in a 34% share of income in 2023 and represents a year-on-year increase of nearly 300% in absolute numbers.

In 2024, we expect this trend to continue and to decrease the share of basic funding to 45% while increasing the overall budget of KInIT.

In the future, it is crucial to keep the current donations as well as to further increase the income from other sources, thus balancing the proportion between the three main sources of funding – donations, grants and industry collaborations.

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Concluding remarks

The widespread adoption of Large Language Models has unleashed the potential of artificial intelligence, bringing its benefits to the public and society on an unprecedented scale. The heightened interest in AI has led to the emergence of novel applications and advantages. However, society, once again, found itself unprepared for the disruptive nature of these technologies, presenting various challenges.

At Kempelen Institute we are part of these advancements, not only by researching innovative methods but also by actively contributing to the ongoing discourse. An example of our commitment is evident in our published stances, such as our "Stance on the regulation of Generative Artificial Intelligence." By participating in this discourse, we aim to navigate the



impact of AI responsibly and help shape its ethical and regulatory frameworks for the benefit of society and inline with the European way of trustworthy AI.

Our core research activities were realised within various European grants, and we were proudly member in eleven international grants: CEDMO, TAILOR, AI4Europe, Eyes4ICU, vera.ai, VIGILANT, AI-CODE, ExU, NSlant, and as a coordinator, DisAI and SKAI-eDIH. A noteworthy accomplishment has been our progression to the 2nd stage of the Horizon Europe Teaming for Excellence scheme, a European Commission initiative aimed at establishing centres of excellence in widening countries.

“Our success is not only attributed to our internal efforts but also to the invaluable collaboration with international partners.”

Our success is not only attributed to our internal efforts but also to the invaluable collaboration with international partners. Notably, we benefit from the support and guidance of esteemed organisations such as the German Research Center for Artificial Intelligence (DFKI), ADAPT Center at Trinity College Dublin, and The Centre for Research & Technology, Hellas (CERTH). As we continuously improve our capabilities, we are committed to amplifying our impact within the broader Slovak Research and Innovation ecosystem, with a particular focus on academia.

Talent attraction stands as a pivotal goal for KInIT, holding important significance not only for our organisation but also addressing the pressing brain-drain phenomenon in Slovakia. In 2023, we introduced the [slovaks.ai](#) portal, a unique initiative mapping of Slovak AI professionals worldwide. We actively nurtured the next generation of researchers, supervising 12 PhD students and hosting 18 interns throughout the year as part of our commitment to fostering emerging talent. In our pursuit of creating an even more competitive and attractive environment for skilled individuals, we prepared the Marie Skłodowska Curie Action project, specifically tailored for postdoctoral researchers. Through these strategic initiatives, we aim to contribute meaningfully to reversing the brain-drain trend.

In 2023, we started the delivering of the European Digital Innovation Hub on AI – Hopero project. This project underscores our commitment to assisting the Slovak industry in seamlessly integrating intelligent technologies, specifically artificial intelligence, into their daily operations and products. By actively participating in this endeavour, we aim to catalyse the adoption of cutting-edge technologies, fostering innovation and competitiveness within the Slovak industry. Simultaneously, we continued collaboration with 12 companies in 2023. These research-industry collaborations serve as a demonstrator to our ongoing efforts to bridge the gap between academia and industry, facilitating the exchange of knowledge and expertise for mutual growth and advancement.





Reflecting the AI trends and the context of Slovakia and Central and Eastern Europe, our commitment lies in actively contributing to and researching low-resource AI in the coming years. This strategic focus involves exploring innovative approaches to designing competitive methods when faced with constraints such as limited data, sparse labels, or constrained computation power. The significance of these efforts is particularly pronounced in the context of applications within Slovakia and Central and Eastern Europe, notably in language-related domains. Moreover, our engagement with low-resource AI aligns with broader goals of environmental sustainability, as it promotes efficient utilisation of technology, minimising its impact on the environment.

In essence, our research endeavours not only aim to tackle regional challenges but also contribute to a more sustainable and responsible application of AI in diverse contexts.



KiNIT key achievements 2023

15

scientific outputs made publicly available

Our scientific outputs were presented in 15 papers published in scientific journals and international conferences and proceedings. We are especially proud on 3 full papers accepted at EMNLP conference (A* level).

12

research industry collaborations

We were engaged in 12 research industry collaborations (7 pilot projects, 5 long term collaborations) and 1 more collaboration in the preparation phase. In total, we have collaborated with 25 industry partners since the beginning.

16

research project proposals

We prepared 26 competitive funding proposals, 11 of which were in Horizon Europe and 10 in Recovery and Resilience Plan Slovakia. We have successfully advanced to the second stage of the Teaming for Excellence HE program.

11

international projects in progress

We were involved in 11 international projects together with 91 partners from 25 countries: 2 from 2021 (CEDMO, TAILOR), 6 from 2022 (AI4Europe, vera.aim Eyes4ICU, Hopero, VIGILANT and DisAI) and 3 new (AI-CODE, EMIF, NSIant).

75%

of our research projects are interdisciplinary

We collaborate in our projects with researchers from multiple disciplines, like history, psychology, social sciences, philosophy, information sciences, or journalism. KiNIT team is also composed of researchers from several disciplines.

1 779

sum of citations of individual researchers

We gained a total of 1779 citations to our works (as listed in our Google Scholar profiles); the citations were present in papers published worldwide throughout 2023.

18

basic research supporters and donors

Basic research activities were supported by 18 subjects in 2023; all of them were private companies, including 7 large enterprises and 11 SMEs.

34

Average age

From 24 FTE at the establishment of KiNIT we grew to 52.7 FTE while our average age stayed unchanged.

30

early stage researchers nurtured

We continued in PhD studies with growing the team to 12 students. Moreover, we welcomed and supervised 18 interns (mostly bachelor and master students).

3 900+

followers on LinkedIn

The number of followers on social media is growing also thanks to our 150+ media appearances. We reached 3900+ followers on LinkedIn and 1500+ on Facebook.

1. Delved fully into solving of European projects, new processes established

Following previous year's success of acquiring multiple European grant projects, in 2023 we delved into solving them. Lion's share of KInIT's budget is now constituted from these projects. While the research and innovation project teams were working, we further refined our grant project management processes and collaboration patterns with our international partners. While solving ongoing projects consumed a lot of effort, acquiring new ones has not ceased either: we managed to win three new international projects. Furthermore, KInIT has already attained a position of a recognized granting partner, when we receive more European project consortium invitations than we can serve.

Basic Research

Applied Research

Transfer

3. Talent development expanded

As a research institute, we recognize the importance of fostering an environment that encourages and facilitates talent circulation, as this ultimately leads to increased innovation and growth in our field. In 2023 KInIT's talent development activities grew steadily. This year, we have recorded the highest number of early stage researchers in KInIT. 12 PhD students and 18 interns. Our PhD students and interns work on interesting challenges, selected to serve both training and research/engineering purposes. Multiple of these works have already resulted in accepted research papers, competitions won, practical tools and successful grant applications. To further support talent development, we prepared several grant proposals in the Horizon Europe MSCA programme: one new doctoral network proposal (following the good example of the already ongoing Eyes4ICU Horizon Europe project) and one COFUND proposal for post-doctoral positions.

Basic Research

Applied Research

Culture

2. The international environment helps our excellence in science

In 2023 our efforts in conducting excellent research started to bear first fruit. KInIT is at the edge of knowledge in language technologies. For the first time in history, we managed to have 3 full papers at the research venue of a prominent quality: the EMNLP conference (Empirical Methods in Natural Language Processing). Being ranked as A* conference, it falls within the top 7% of ranked venues according to the recognized CORE conference ranking. Not only is this the result of our hard work on international research projects, it is also a sign of focused research creativity we learned recently and are willing to develop further. We are aware that it is the international environment that pushes us further. So far, we collaborated with more than 90 project partners from 25 countries from around the world.

Basic Research

Applied Research

4. Knowledge transfer to industry continued and strengthened by Hopero

In line with our mission to become a bridge between academia and industry in 2023 we continued and invigorated our cooperation with industrial partners. We managed to successfully continue our industry long-term collaborations and PhD projects (ZSEE, sféra, Softec, ESET and Luigi's box). Although we consider stable partnerships very important, we thrive to establish new ones: in 2023 we started several new pilot industry cooperations (Aspecta, AI Dental, Bencont, Martinus, Evolveum, ČSOB, SLSP and Zaraguza). Also after a rather long preparatory phase we managed to start implementing the European Digital Innovation Hub project HOPERO, which is consistent with our goal to bring excellent science to companies in our region. The fundamental aspect is that we involve them in applied research activities that result in a better understanding of their opportunities and limitations, so we do not offer them product development.

Applied Research

Transfer

5. AI community development towards fostering dialogue and collaboration

KInIT has supported the Slovak diaspora community with a focus on AI-related initiatives. Our efforts culminated in the launch of the slovaks.ai map, designed to unite Slovak AI professionals living abroad. A significant milestone was achieved with the organization of the first Slovaks AI Forum, where over 100 Slovak AI professionals gathered in an online forum to exchange ideas aimed at fostering a brighter future for Slovakia through AI innovation. Moreover, our commitment to nurturing talent persisted through the continuation of the PhD external mentorship program. Further amplifying our engagement and our dedication to fostering dialogue and collaboration within the AI community, we hosted the Better AI Meetup. We covered a range of relevant topics, which drew a notable attendance of 174 in-person guests and 813 online attendees.

Policies

Science Popularization

7. Effective and quality AI research through professionalizing research pipelines

Our quest of professionalizing research pipelines in KInIT resulted in 2023 in further growth of our research engineering team to 11 members. Operating across multiple research teams, the research engineers significantly contributed to tech transfer through involvement in the vast majority of industrial collaborations. Through various focused activities, KInIT continued in the systematic development of competences in utilizing high performance computing infrastructure (in 2023 Slovak supercomputer Devana), cloud computing with focus on effective model deployment and use of specialized, AI-oriented services like Amazon SageMaker. The notable achievements include the upgrade of our on-premise infrastructure, strengthening our partnership with AWS, systematization of our cloud workflows and significant contribution to defining the strategy of KInIT infrastructure development through national and international projects.

Basic Research

Applied Research

Transfer

6. Heading towards financial sustainability

Thanks to fruitful grant writing in 2022 and pursuing business partnerships, KInIT's grants and industry collaborations accounted for 50.8% of revenues in 2023. In three years, the institute managed to secure more than half of its budget from independent sources while doubling its staff. The increasing proportion of third party financing, from 8.4% in 2021 to 50.8% today, proves the viability of KInIT's organizational model inspired by many years of experience from abroad showing the strong innovation potential of public-private partnerships, e.g. the Fraunhofer Institute or the German Research Center for Artificial Intelligence (DFKI) - world centers in the field of intelligent technologies.

Basic Research

Applied Research

Transfer

Culture

8. Strengthened collaboration with Slovak academia

Fostering the KInIT mission of connecting the Slovak R&D ecosystem, we have strengthened the collaboration with Slovak academia. We are honored that the Slovak Academy of Sciences has become an associated member of the KInIT. In 2023 KInIT collaborated with Slovak Academy of Sciences, Slovak University of Technology in Bratislava, Comenius University in Bratislava and University of Economics in Bratislava to prepare five proposals for research and innovation projects. Together with the Technical University of Košice and the Institute of Philosophy of the Slovak Academy of Sciences we started two research projects funded by The Slovak Research and Development Agency and continued our ongoing collaboration with Comenius University. Our researchers also nurtured young talents by teaching at various faculties.

Basic Research

Applied Research

Transfer

Policies

9. AI ethics and regulation activities help develop responsible R&D

In 2023 we prepared several guidelines, frameworks and processes for the assessment of ethical, legal and societal issues regarding the research activities in KInIT. For example, we developed specialized ethics checklists to help ensure that our research projects will meet high ethical standards and respect the rights and well-being of any participants involved. We also participate in debates about the future of AI regulation in Europe. As regular members or external experts, KInIT employees helped with preparation of various stances published by the national committee on ethics and regulation of AI (CERAI). We have also published our own stance on the selected aspects of AI regulation.

Basic Research

Applied Research

Transfer

Policies

Culture

11. Flagship asset development

We recognize the value of language resources and assets necessary for automated text processing, which are significantly underdeveloped in the case of Slovak language. We made several key steps towards improving this situation. We teamed up with Edusef, a community around an educational web based portal edusef.sk, to collaborate on the development and utilization of linguistic databases including lexical, morphological, syntactic and semantic information. We released a preview version of a catalog of NLP tools for Slovak language processing.

Basic Research

Applied Research

Transfer

Culture

10. Demystifying Artificial Intelligence

AI is transforming virtually all industries; its significance lies in its potential to improve quality of life through intelligent systems that augment human capabilities. Also thanks to the AI boom, our visibility and reputation continue to soar as we actively engage in clarifying the principles, risks, benefits and social impact of AI. Our researchers appeared in reputable Slovak media outlets for over 150 times in 2023, including TV, radio and print media. KInIT involvement in numerous conferences, panel discussions, and public events has been instrumental in disseminating knowledge to diverse audiences. We are particularly proud of our interactions with high school and university students, underscoring our commitment to nurturing talent within the field.

Policies

Science Popularization

12. People and culture are at the top of our priorities

At our institute commitment to fostering personal growth and community building throughout the year 2023 stayed one of top priorities. Internally, we prioritized creating an environment where our team members could thrive and develop both personally and professionally. Externally, being situated within The Spot, a well known coworking space for tech startups, we actively engaged with the broader community. We believe in the importance of making science accessible and understandable to the public. To this end, we organized communication workshops for our employees, equipping them with the skills to effectively communicate science on professional social media platforms.

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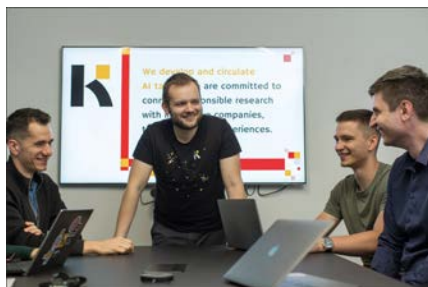
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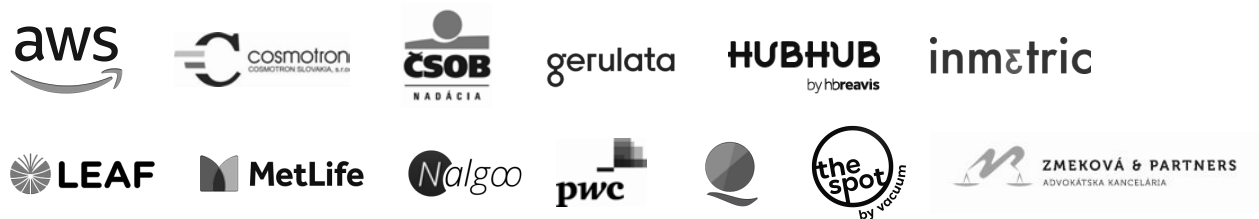


KINIT

We work closely with corporate partners to put ideas to work



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