



**We turn ideas into technology  
innovations**

by bringing academia closer  
to business

# PROBLEM

Have you ever tried to find a scientist to cooperate with on a university website? UGH!

When it comes to accessing information from academic institutions, one can quickly get the feeling of trying to get into a mysterious BLACK BOX.



## UNIVERSITY WEBSITES: A MYSTERIOUS BLACK BOX?

Universities create research-based inventions that have the potential to become valuable commercial applications. However, these inventions are locked behind the doors of academia because research institutions lack the tools to effectively present their expertise to business. It is difficult for businesses to access these intellectual assets to innovate.

As a result, opportunities are missed because universities do not benefit from commercialisation, scientists do not see their discoveries turned into spin-offs, and businesses miss out on cutting-edge knowledge. Everyone loses out.

## EXPERTS.AI

EXPERTS.AI is a smart matchmaker connecting the right research to the right application.

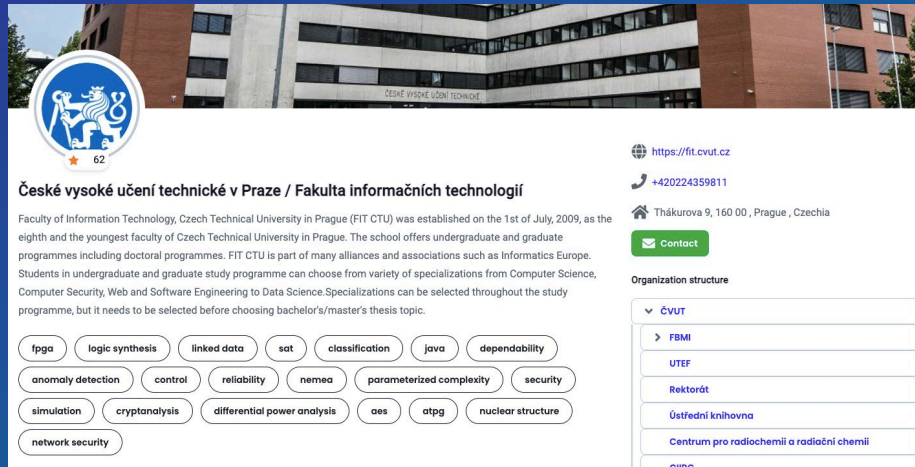
As a AI-powered platform crunching vast amounts of scientific data or as a built-in widget on websites of universities, EXPERTS.AI links companies with top scientists to create remarkable business innovations. EXPERTS.AI is all-in-one tool to present:

- ✓ scientists
- ✓ research outcomes such as patents, publications, or projects
- ✓ equipment and spin-offs



# SOLUTION

# Widgets on university websites



**České vysoké učení technické v Praze / Fakulta informačních technologií**

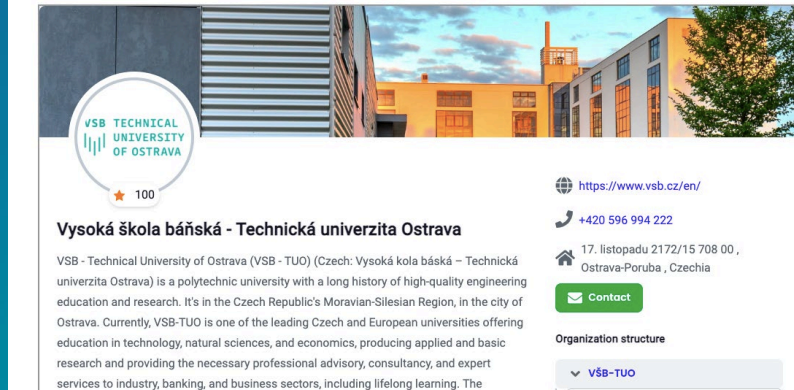
Faculty of Information Technology, Czech Technical University in Prague (FIT CTU) was established on the 1st of July, 2009, as the eighth and the youngest faculty of Czech Technical University in Prague. The school offers undergraduate and graduate programmes including doctoral programmes. FIT CTU is part of many alliances and associations such as Informatics Europe. Students in undergraduate and graduate study programme can choose from variety of specializations from Computer Science, Computer Security, Web and Software Engineering to Data Science. Specializations can be selected throughout the study programme, but it needs to be selected before choosing bachelor's/master's thesis topic.

Research areas: fpga, logic synthesis, linked data, sat, classification, java, dependability, anomaly detection, control, reliability, nemea, parameterized complexity, security, simulation, cryptanalysis, differential power analysis, aes, atpg, nuclear structure, network security.

Contact: <https://fit.cvut.cz>, +420224359811, Thákurova 9, 160 00, Prague, Czechia.

Organization structure: ČVUT, FBMI, UTEF, Rektorát, Ústřední knihovna, Centrum pro radiochemii a radiační chemii, GIBS.

## Partnership

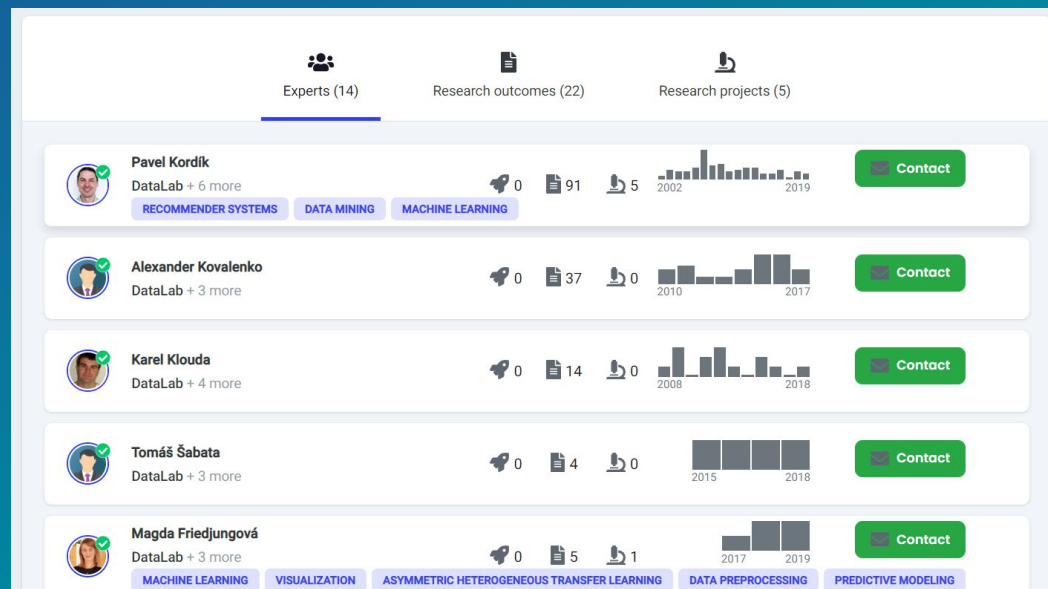


**Vysoká škola báňská - Technická univerzita Ostrava**

VSB - Technical University of Ostrava (VSB - TUO) (Czech: Vysoká škola báňská - Technická univerzita Ostrava) is a polytechnic university with a long history of high-quality engineering education and research. It's in the Czech Republic's Moravian-Silesian Region, in the city of Ostrava. Currently, VSB-TUO is one of the leading Czech and European universities offering education in technology, natural sciences, and economics, producing applied and basic research and providing the necessary professional advisory, consultancy, and expert services to industry, banking, and business sectors, including lifelong learning. The

Contact: <https://www.vsb.cz/en/>, +420 596 994 222, 17. listopadu 2172/15 708 00, Ostrava-Poruba, Czechia.

Organization structure: VSB-TUO.



Experts (14) | Research outcomes (22) | Research projects (5)

**Pavel Kordík**  
DataLab + 6 more  
RECOMMENDER SYSTEMS | DATA MINING | MACHINE LEARNING  
0 | 91 | 5 | 2002 | 2019 | Contact

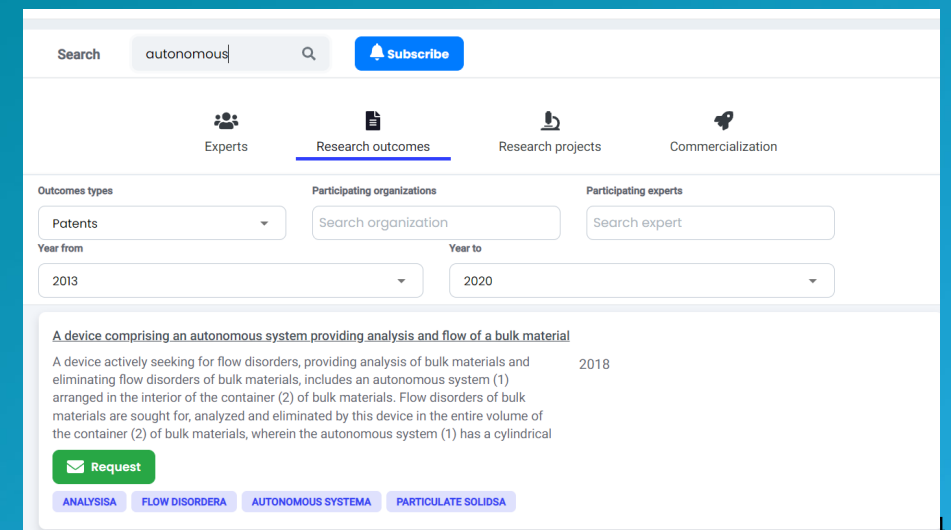
**Alexander Kovalenko**  
DataLab + 3 more  
0 | 37 | 0 | 2010 | 2017 | Contact

**Karel Klouda**  
DataLab + 4 more  
0 | 14 | 0 | 2008 | 2018 | Contact

**Tomáš Šabata**  
DataLab + 3 more  
0 | 4 | 0 | 2015 | 2018 | Contact

**Magda Friedjungová**  
DataLab + 3 more  
0 | 5 | 1 | 2017 | 2019 | Contact

Machine Learning | Visualization | Asymmetric Heterogeneous Transfer Learning | Data Preprocessing | Predictive Modeling



Search: autonomous | Subscribe

Experts | Research outcomes | Research projects | Commercialization

Outcomes types: Patents | Participating organizations: Search organization | Participating experts: Search expert

Year from: 2013 | Year to: 2020

**A device comprising an autonomous system providing analysis and flow of a bulk material**  
A device actively seeking for flow disorders, providing analysis of bulk materials and eliminating flow disorders of bulk materials, includes an autonomous system (1) arranged in the interior of the container (2) of bulk materials. Flow disorders of bulk materials are sought for, analyzed and eliminated by this device in the entire volume of the container (2) of bulk materials, wherein the autonomous system (1) has a cylindrical  
2018

Request

ANALYSIS | FLOW DISORDER | AUTONOMOUS SYSTEMA | PARTICULATE SOLIDS

# Easily customizable and integrated to websites or intranets

The screenshot displays the Microsoft Teams interface. On the left, the navigation pane shows 'Všechny týmy' (All teams) with a list of teams: 'Team-FIT', 'Obecné', 'Extras', 'ICT', and 'SSP'. The 'SSP' team is selected. The main area shows a search bar with 'data' entered. Below the search bar, there are tabs for 'Opportunities' and 'Experts', with 'Experts' being the active tab. A 'Search Type' dropdown menu is set to 'Expertise'. The results list three experts:

Expert	Company	0	17	2	2004	2019	Contact
Oldřich Nouza	Profinit, s.r.o. + 2 more						<a href="#">Contact</a>
Jiří Toušek	Profinit, s.r.o. + 1 more				2017	2019	<a href="#">Contact</a>
Lukáš Hermann	Profinit, s.r.o. + 2 more				2012	2019	<a href="#">Contact</a>



**The General Data Protection**

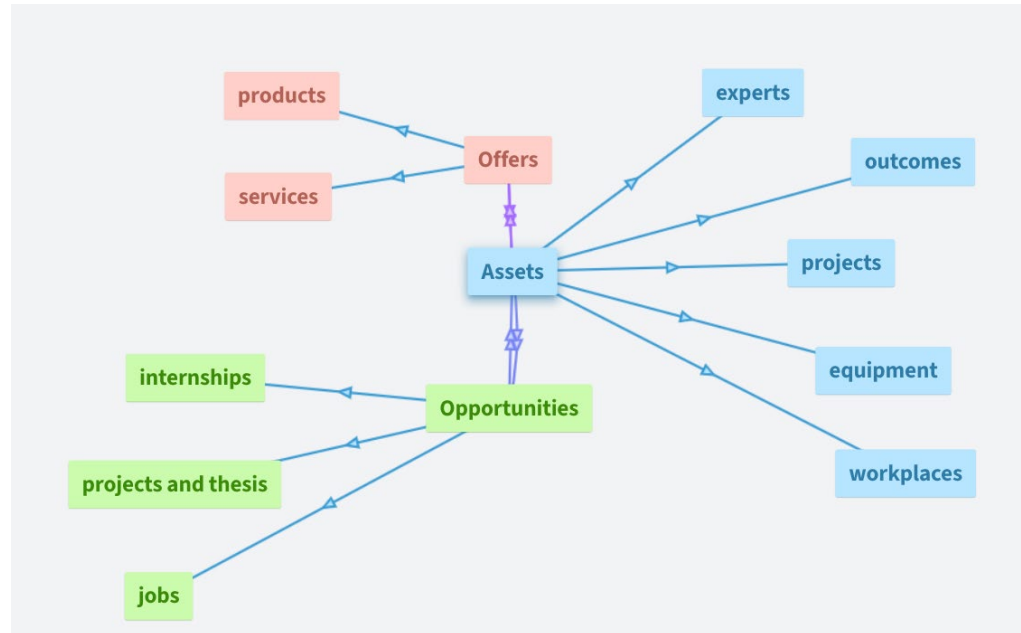
## **Secure and compliant**

We provide all legal materials that are necessary, our solution is secure and fulfills all required data protection standards such as the GDPR.

COMPLIANT



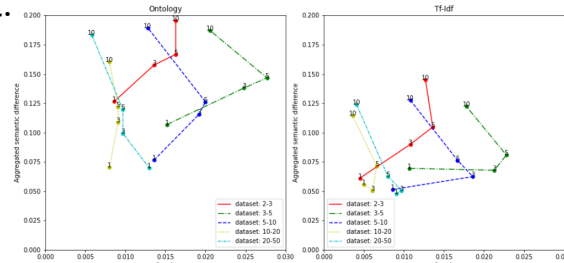
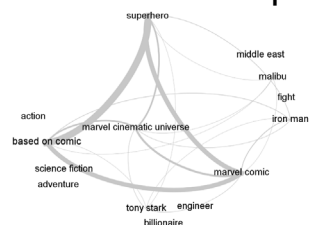
# AI algorithms used and developed for EXPERTS.AI



ALS training:  $\forall p_i : L(p_i) = ||R_i - P_i \times Q^T||_2 + \lambda \cdot ||p_i||_2$   
 $\forall q_j : L(q_j) = ||R_i - P \times Q_j^T||_2 + \lambda \cdot ||q_j||_2$

Ontology:

Improvement:



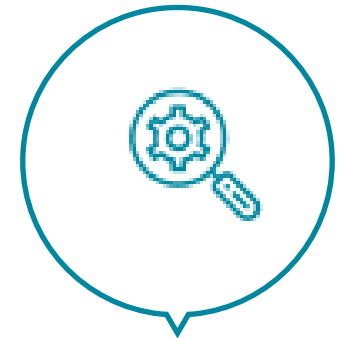
AI-technology to better understand and represent data on research and innovation

Transformers,  
graph neural networks,  
smart ontologies

and present right data to the right  
users

Recommender systems with  
constraints,

personalized search,  
learning to rank algorithms,  
semantic suggestions



Smart data



Smart recommendation  
and personalized search

# Our clients



**FACULTY  
OF INFORMATION  
TECHNOLOGY  
CTU IN PRAGUE**



**UNIVERSITY  
OF WEST  
BOHEMIA**



**VSB TECHNICAL  
UNIVERSITY  
OF OSTRAVA**



**University of  
Hradec Králové  
Faculty of  
Science**

**ŠKODA**



**FACULTY  
OF BIOMEDICAL  
ENGINEERING  
CTU IN PRAGUE**



# Reference



**Marcel Jiřina**

Dean, FIT CTU



**Nikolas Mucha**

Commercialisation Specialist,  
VSB-TUO



**Piotr Kulczakowicz**

UM Ventures' Senior Innovation  
Manager, University of Maryland



## Our Vision

### Golden standard for presentation of intellectual assets.

Academic institutions globally use EXPERTS.AI to present their experts, research outcomes and lab equipment.

Universities also use EXPERTS.AI to present opportunities for their students such as internships or research positions.

### Global marketplace for companies to innovate.

EXPERTS.AI serve as a single point of access to intellectual assets globally. EXPERTS.AI enable companies to look for specific expertise in academic and in research institutions in all fields of research around the world in one time and at one place.

### Positive social and economic impact.

EXPERTS.AI foster and speed-up innovations globally and create positive social and economic impact by enabling exciting research outcomes to turn into real-life applications.



# UNICO

**We bring academia  
closer to business.**



**Vojtěch Nosek**

CEO & Co-founder

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