

# Trendy v HPC a AI, reference, příklady

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## HPC@AI superpočítače, storage projekty

Realizované projekty:

- PROJECT storage na IT4Innovations, 3PB, Infortrend + IBM GPFS
- Cesnet, objektová storage, Lenovo servery + expanze, 33PB, CEPH (VŠB Ostrava)
- Cesnet, objektová storage, 25PB, CEPH (ELI Beamlines)
- Ústav molekulární genetiky AV ČR, virtuální pracovní stanice (Lenovo, Nvidia, NetApp, Cisco, VMware)
- Cesnet, HD cluster, 96 CPU uzlů (MUNI+UMG)
- UPOL, komplexní CPU a GPU cluster (50x NVIDIA A30)
- Český metrologický institut, cluster, 21 CPU uzlů, GPU uzel (A100), HDR IB, diskové pole
- ÚOCHB AV ČR, GPU cluster, 30 serverů s NVIDIA GPU

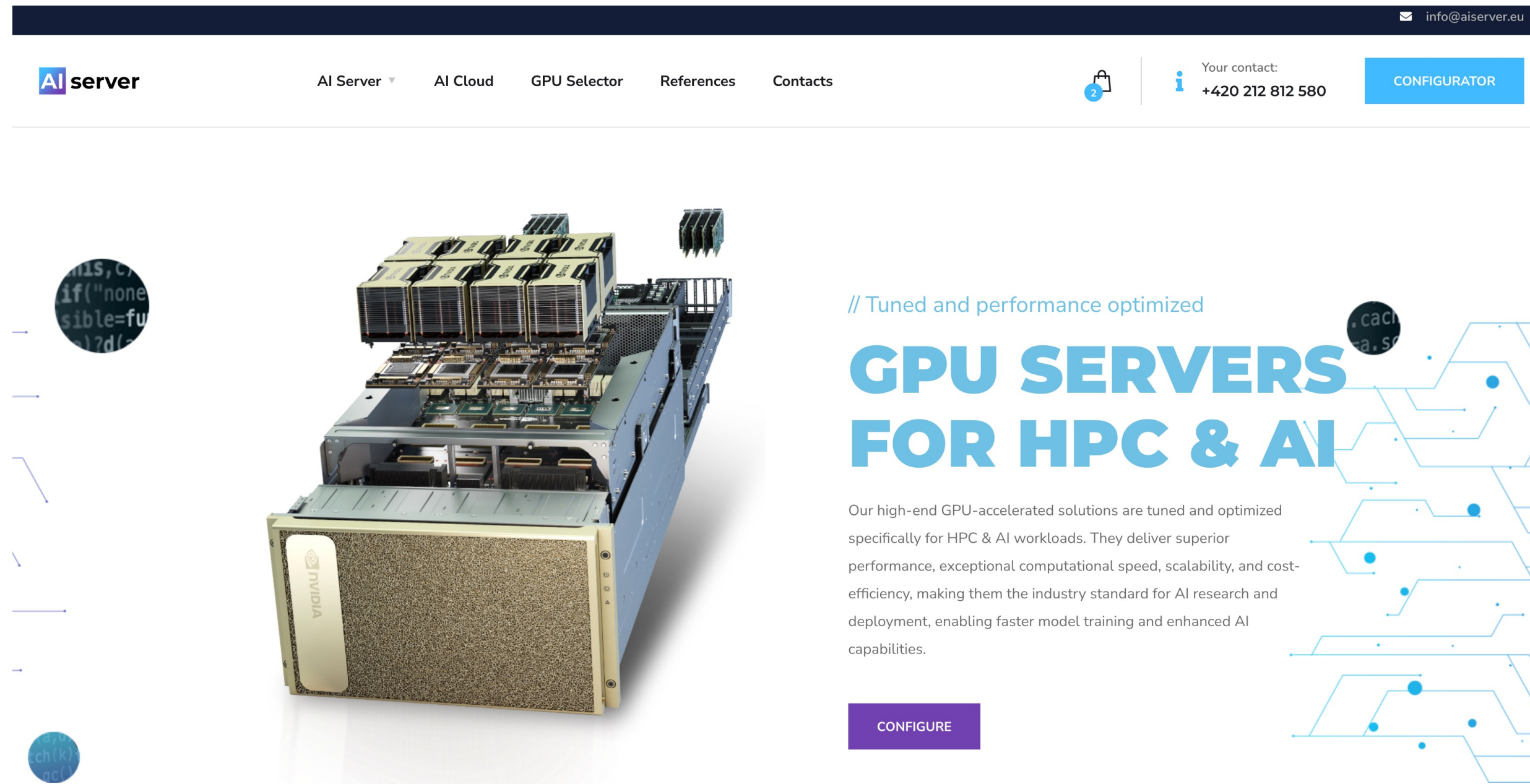
Návrhy na infrastrukturu:

- HPC clustery na IT4Innovations (2024, 2026)
- objektová storage na IT4Innovations, CEPH



# Portál pro konfiguraci

<https://aiserver.eu>



The screenshot displays the website's header with the 'AI server' logo, navigation links for 'AI Server', 'AI Cloud', 'GPU Selector', 'References', and 'Contacts', a shopping cart icon with a '2' notification, contact information '+420 212 812 580', and an email address 'info@aiserver.eu'. A blue 'CONFIGURATOR' button is also present. The main content area features a large image of a server rack with multiple GPUs, a 'NVIDIA' logo on the front panel, and decorative code snippets in circular bubbles. To the right, the text reads: '// Tuned and performance optimized', 'GPU SERVERS FOR HPC & AI', and a descriptive paragraph about high-end GPU-accelerated solutions. A purple 'CONFIGURE' button is located at the bottom of this section.

# MAMA AI - Platforms & Solutions



## Communication AI (Telma, mSpeech, mVoice)

- Text, voice, omnichannel assistants
- Information gathering
- Automatic notifications and reminders
- Call routing, email routing
- Tailored voices

## Presentation AI (mStudio, ppt2video)

- Instructional videos from ppt presentations
- Dubbing videos in many languages
- Personalized Reporting

## Search AI (mSearch)

- Hybrid/Semantic search of data
- Many languages
- Fast and intuitive
- Similarity search across many sources

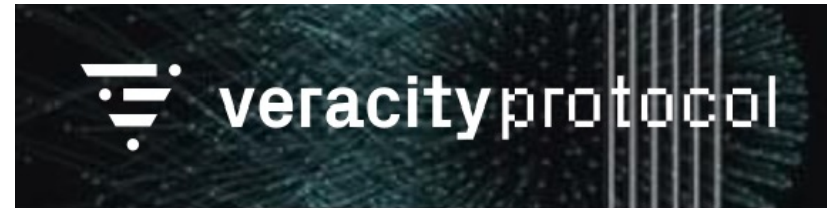
## Metaverse AI (mVR)

- Virtual and augmented reality
- Stress situation exercises
- Production line / Manufacturing training

## Reasoning and generative AI (mAI)

- Data Science / Data modeling
- Predictive modeling
- LLMs incl. GPT-like architectures
- Anomaly detection

# Portfolio



*Most advanced Vision AI models for verifying identity, authenticity, and integrity of physical objects.*



Diagnosis of diabetic retinopathy by AI



*Next-generation platform for computation in order to provide companies with personalized AI Systems accessible in one click.*



Open source software development kit (SDK) that provides the infrastructure and a unified framework for 65+ blockchain protocols, allowing any developer to build Web3 applications with no blockchain experience.

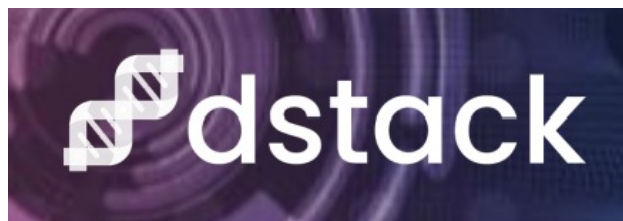
# Portfolio



*Room-temperature photonic chips for scalable universal quantum computing*



<https://www.investujeme.cz/tiskove-zpravy/nemecka-quantagonia-umi-propojit-svet-tradicnich-a-kvantovych-pocitacu-cesi-z-tensor-ventures-ji-podporili-nejvetsi-castkou-ze-vsech/>



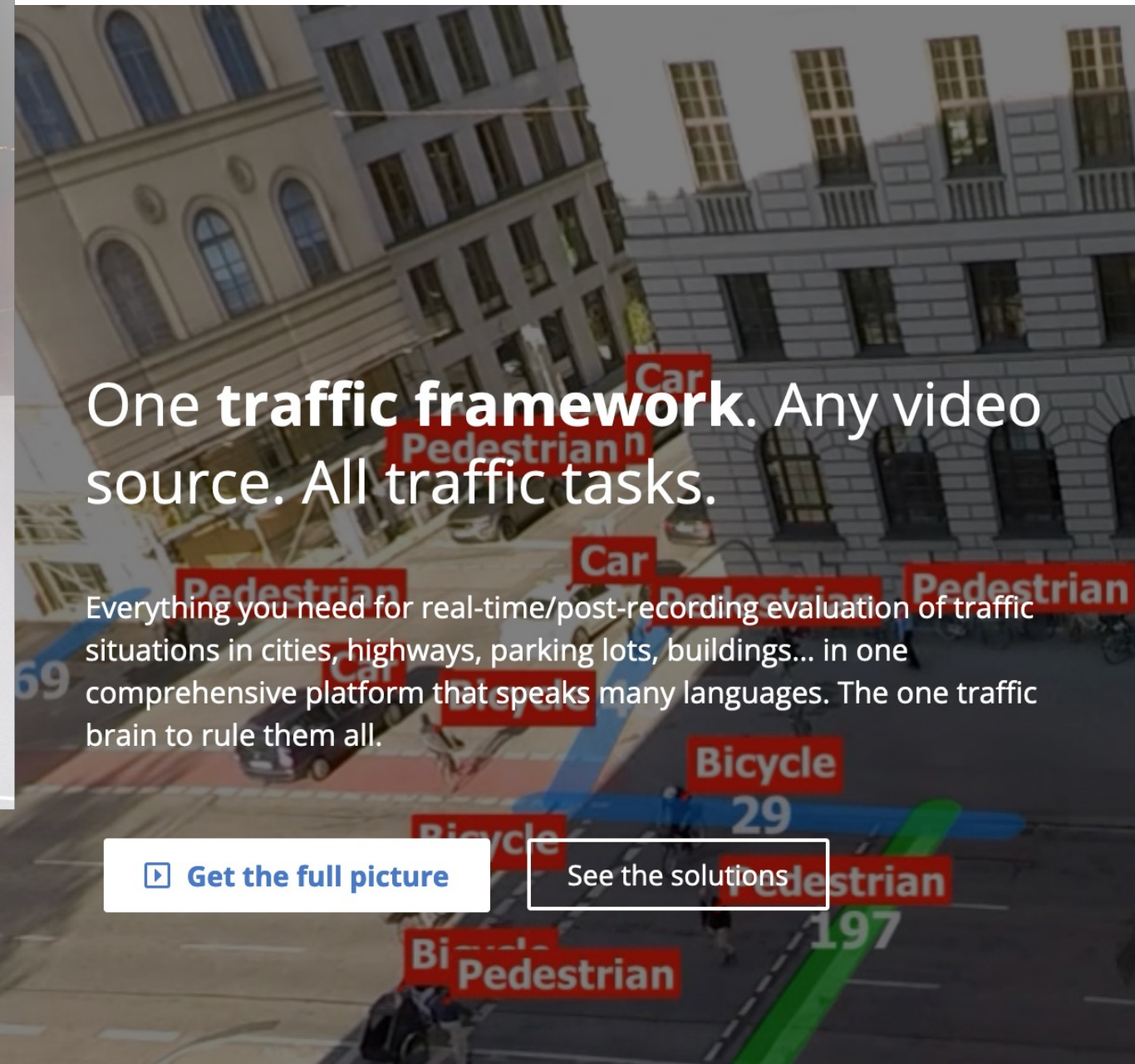
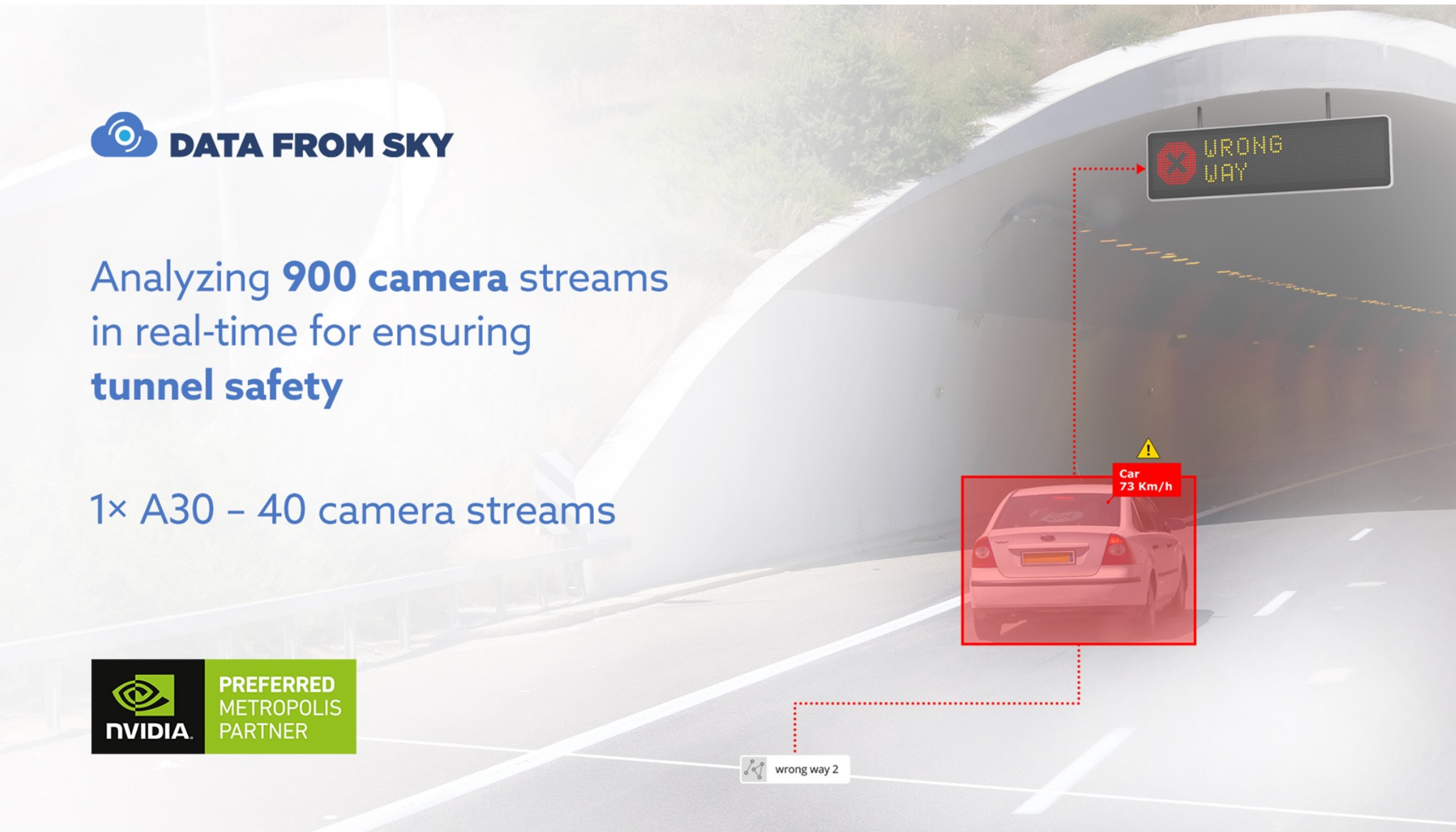
*Technologie dokáže prostřednictvím jednoduchého nástroje velkým i malým firmám zásadně usnadnit práci s modely strojového učení*

<https://cc.cz/firmam-otevira-dvere-k-strojovemu-uceni-do-nemeckeho-startupu-cesi-posilaji-dvanact-milionu/>.

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