Dr. Ekaterina Prytkova

- **Position**: Postdoctoral Research Fellow in Economics & Data Science

- **Interests**: AI stack & Ecosystem, Hardware-Software systems, Open Source, Digitalization, Future of Work

- **Project**: Mapping AI model market leveraging webscraping & NER

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Gredeg

chAIre

AI Stack

Physical layer

Hardware fleet
CPU, GPU, TPU, FPGA

Middleware

Hardware-specific	Hardware-agnostic
GPGPU - CUDA, ROCm, Triton	Heterogeneous compute - OpenCL, oneAPI

Logical layer

Model Development

ML Frameworks
TensorFlow, PyTorch, JAX

Training
MLFlow, Vertex AI, KubeFlow, Weka

Fine-tuning & Transfer learning
Amazon Bedrock, Azure AI Studio/DevOps

Data & Storage
(synthetic and natural)

Context data
external sources (RAG)

Training data (web scale)
Pile, Common Crawl

Fine-tuning data
domain-specific (client). alignment (RLHF, feed)

Model/code hubs
Hugging Face, Replicate, GitHub

Deployment for Inference

Cloud

Server-based - L	Containerized - M	Serverless - S
Azure VMs, GCP instance group, Amazon EC2	Kubernetes platforms by Amazon, Google, Azure	Amazon Lambda, Google Cloud Functions, Azure Functions

Edge
XS-L

API endpoint

Data flywheel

Application layer

Distribution format

B2B: App-centric	B2C: AI-centric
Apps+AI API integration	Model+UI (end-to-end app)

Plug-ins
tools & data