Scaleout

Scaleout Professional Services

Scaleout Professional services help you accelerate innovation and reduce risk in any stage of your AI journey. Add Scaleout to your team as resources, or choose from our service packages tailored to different stages in your innovation process.

Our machine learning engineers can help you in any stage, from developing your first model in the lab to large-scale production pipelines. Our pledge is to bring the perspective of data access and privacy into the planning in order to future-proof your AI initiatives.

We can help with:

- **AI formulations of business problems**
- **Exploratory data analysis**
- **Developing and optimizing ML models**
- **ML pipelines**
- **Workflows**
- **The MLOps ecosystem for Kubernetes**
- **Federated learning**
- **DevOps, CI/CD**
- **Security and Blockchain**
- **Project and product management**

Contact us for custom quotes, contact@scaleoutsystems.com

Service packages

We have collected some common ways we have provided expert support to customers into service packages. Contact us for a custom statement of work.

- AI Pilot. A short project designed specifically for your first AI initiatives. Together we take a ML problem all the way from idea to deployed model in 1-3 months.
- Decentralized AI. Training, projects and support packages for organizations that want to explore and scale privacy-preserving and federated learning.

Key strategic advantage

There are three macrotrends that organizations need to factor into their AI strategy:

1. There is a rapidly growing focus on data security and data sovereignty. The regulatory landscape increasingly limits sharing of data across borders and between organizations. This leads to practical issues with data access for companies with data in several countries or subsidiaries.
2. Privacy and personal integrity is becoming a key focus in sustainable AI. This is a good thing, but it impacts any AI efforts involving personal data.
3. The cloud is becoming increasingly distributed and AI is moving to the edge. The majority of data will need to be processed where it is created and this has major implications for e.g. IoT and autonomous driving.

Ensure independence of specific cloud providers. We have a particular focus on cloud-native computing and we specialize on the vibrant open source landscape of ML engineering tools. We will work with any cloud provider or on-premise infrastructure you prefer, and we can help you make sure that your solutions can move freely and that you are ready for hybrid cloud.

Succeed with open source. Scaleout is developing and maintaining an open source machine learning platform optimized for flexibility and rapid deployment in any cloud or on-premise. If you want us to bring the tools you need for your project we offer deployment services and support.

Put privacy-preserving ML on your agenda. If your organization has identified future challenges with data access due to regulatory, privacy or network transfer issues and is currently adapting to the AI transition, our expertise both in MLOps and in decentralized and privacy-preserving AI helps you future-proof your strategic investments.

Partner with the developers of a world-leading platform for decentralized AI. Scaleout is a world leading actor in R&D and product development for federated learning and decentralized AI.

About Scaleout

We're a team of data scientists, machine learning engineers, software engineers, and entrepreneurs with experience from both industry and academic research in AI and applied machine learning, cloud and fog computing, and scientific computing from top-ranked Uppsala University in Sweden.

We’ve delivered solutions for, worked with and presented our research for many of the largest and most reputable organizations in the world, including AstraZeneca, SAAB Defense Systems, Swedish National Space Agency, Autodesk, Raysearch Laboratories, BillerudKorsnäs, Scania.

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Decentralized AI

A federated learning knowledge boost

Strategy and technical training with the purpose to equip your team with a holistic understanding of the opportunities and challenges with privacy-preserving and federated learning.

Key outcomes:

- A high level understanding of the main opportunities and challenges with building decentralized AI systems.
- Detailed insight into the architecture and operational aspects of production federated learning.

What's included?

- Knowledge boost seminar about federated learning targeted at leaders and engineers.
- A half-day hands-on workshop where we dig deeper into the technological prerequisites for decentralized AI and where your team gets to build a demo federation using Scaleout software.
    - Led by a Scaleout expert
    - Choose from demo use-cases from a range of application areas and machine learning frameworks.
    - Up to 10 technical team members can be accommodated in the same session.

Cost:

- EUR 3000 (online)

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Federated Learning Pilot Project

As organizations want to validate the use of decentralized AI technology to work efficiently with private and regulated data there can be practical barriers and perceived risk in introducing additional technical complexity in the MLOps pipeline. Typical questions in early stages revolve around the machine learning models targeted and how data distribution might affect accuracy and efficiency. The federated learning pilot is a lean project (1-3 months depending on scope and pace) where the customer and Scaleout work closely together to implement and evaluate a proof-of-concept for a specific use-case. The goal is to develop a first FL solution to the point that its anticipated business value can be systematically assessed and communicated to key stakeholders.

Key outcomes

- A proof-of-concept implementation of a federated learning scenario and machine learning model, jointly determined by the customer and Scaleout.
- A detailed understanding of the technology and infrastructure required to succeed with federated learning.

Key benefits:

- Assess application feasibility of using federated learning models and infrastructure
- Optimization and best practices of MLOps pipelines
- Reproducibility

Resources:

- Scaleout Platform in a public cloud of your choice for the duration of the project[1].
- A senior expert working with your team to scope the project
- A dedicated consultant working hands-on as an extended part of your team.
- A concluding strategy workshop.

Pricing:

- Starting from EUR 10 000 / month (for 0.5 FTE hands-on resource)

[1] Cloud infrastructure costs not included, can be brokered by Scaleout at a 12% markup on IaaS costs. We can also arrange for an on-premise / custom installation at an additional cost.

Scaleout as a service

For users of Scaleout Platform technology with an active support subscription we offer an extended-team service assuring direct access to experts and core developers, prioritized bug-resolution, and a flexible hour pool of hands-on help.

Key benefits

- Ensure access to relevant expertise in all stages of your projects
- Flexible allocation of hands-on resources over time
- Influence over platform roadmap via dedicated contact
- Prioritized bug resolution and feature requests.

Resources:

- Progress reviews with a senior expert (access retainer)
- Access to Scaleout core developers.
- A pool of 15h/month hands-on work by our data scientists and engineers to be used for e.g. architecture advice, ML model development, integrations, custom development and code reviews (work retainer)
- Add additional data science and development resources as needed (adjust from month to month). Up to 40h hands-on work guaranteed next-month delivery.

Cost:

- EUR 2900/month.
- Add additional hands-on hours in the pool at a fixed rate of EUR 90/h (junior), 110/h (senior) (10% discount

AI pilot project

As many of our customers are starting to build up their AI capability a common use of our ML and MLOps services is to support AI Pilot projects. The AI pilot service is designed specifically to help your team succeed with taking a ML use-case from conception to production. It starts with making sure we have a well-defined problem to solve, that we have clear ways to measure the outcomes and that it balances the highest possible impact against the lowest complexity and where stakeholders can act on the results.

1. DISCOVER

In an initial workshop where our senior business developers, product developers, and scientists work with you, following a structured format, to identify the best opportunities for well defined AI pilot projects to build momentum in your organization and your teams.

2. PLAN

Key takeaways from the discovery workshop are used for establishing the structure, responsibilities, deliverables, and resources for the project. As well as setting up the processes, plans, deliverables, and documentation. The main effort is around planning and establishing the AI Infrastructure required for the project. Map data repositories and build integrations towards data sources and ensure that data pipelines can handle preprocessing, transformation and combining data for feature extraction. Infrastructure for taking machine learning into live production, starting with data (access, preparation, ingestion, versioning, etc) to model serving and everything in between based on current infrastructure and projected needs.

3. BUILD

The main phase of the project includes data exploration, preprocessing, unsupervised and supervised learning and visualizations by expert consultants (Data Scientists at Scaleout systems) with iterative interactions/discussions with product specialists from the organization guiding the process. It includes feature engineering, model experimentations, pipeline development, visualization.

4. DEPLOY

The goal of this work package is to deploy the trained machine learning model using production data as well as making sure results, knowledge, and ownership of results in the project is handed over to and internalized at the organization. There will be a final report and a concluding project team workshop at the end of the project. One important aspect of the continuous knowledge transfer is to give the organization the necessary strategic input and prepare an operational roadmap to continue the current project after it ends or start new AI projects.

The advantage of our approach

MEASURABLE Well defined project with measurable outcomes	**NO LOCK-IN** No vendor lock-in and flexible deployment
OWNERSHIP In-house ownership of the solution	**TURN-KEY READY** Full stack data science platform for the entire ML lifecycle

Successful adoption of powerful data-driven AI technologies does not start with a massive transformation of the core organization or in large project silos. Rather, it's done by adopting one use case at a time, harvesting real value from each use case and incrementally building out the knowledge and skills needed to move AI into other business areas by learning to work in an agile process across different roles and teams in the organization.

Key advantages:

- **Enables an agile/lean approach** to AI projects, built with the aim to help cross-functional and full-stack teams deliver production solutions rapidly.
- **Machine learning framework agnostic**. Supports most machine learning frameworks out of the box and with open APIs support extension for additional frameworks.
- **Continuous analytics**. Support for automating pipelines from data ingestion to model deployment and monitoring.
- **Workflow orchestration**. Automate your workflows to handle tasks such as grid searches or active learning pipelines.
- **Simple deployment**. Run anywhere you can run Kubernetes, hosted on-prem, in the cloud or on your laptop.

All projects aim to transfer knowledge critical for a holistic end-to-end view on the full stack data science process. After the AI pilot project Scaleout offers professional services to help you continue developing confidence and fluency to adopt AI in other business areas.

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The AI pilot service – Who is it for?

The AI Pilot Service is a fit for:

- Organizations who might not have the budget to develop a company-wide AI business strategy, but would like to get started with AI.
- Organizations looking to find the AI initiative most likely to deliver a strong return on investment.
- Organizations that need to use limited AI talent and budget and who would like to build AI capabilities in a valuable and productive way.
- Organizations in need of developing workflows for continuous delivery and serving of models.

The AI pilot service – what is included?

Services include (tailored to fit customers' specific stage in the AI journey):

- An initial workshop for identifying pilot use case candidates and a detailed project scoping session.
- AI coach/project management throughout the project to help you with gap analysis, develop your project plan quicker and for identifying proper resources, analyzing risks, managing stakeholders, documenting plans, and managing expectations.
- 0.5 FTE ML and MLOps resource handpicked for the specific use case and organization.
- Vendor agnostic data science platform optimized to quickly start building MLOps knowledge and capability deployed and managed in a cloud of your choosing (Scaleout Platform).
- Full-stack data science support with a direct line to Scaleout data science & engineering support team throughout the project.

Cost

Starting from 10 000 EUR/month excl. VAT. Contact us for a quote: contact@scaleoutsystems.com

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Two recent examples

RaySearch Laboratories

From 48 hours to 48 minutes

We recently worked with an AI pilot project for Raysearch Laboratories, a world leader in software for radiation therapy. We delivered an implementation that reduced the time from 48 hours to 48 minutes for full model training. With full monitoring. Even from a smartphone.

tacton

Dynamic price optimization

Tacton, a smart manufacturing software solutions provider, turned to Scaleout for their first AI pilot project. A project for improving the pricing of configurations, and initiating developments towards establishing a new AI decision-support product within the Tacton software service.