



# Siml.ai

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**The platform for AI-based physics simulations**

600+ USERS

500% GROWTH SINCE  
ALPHA LAUNCH

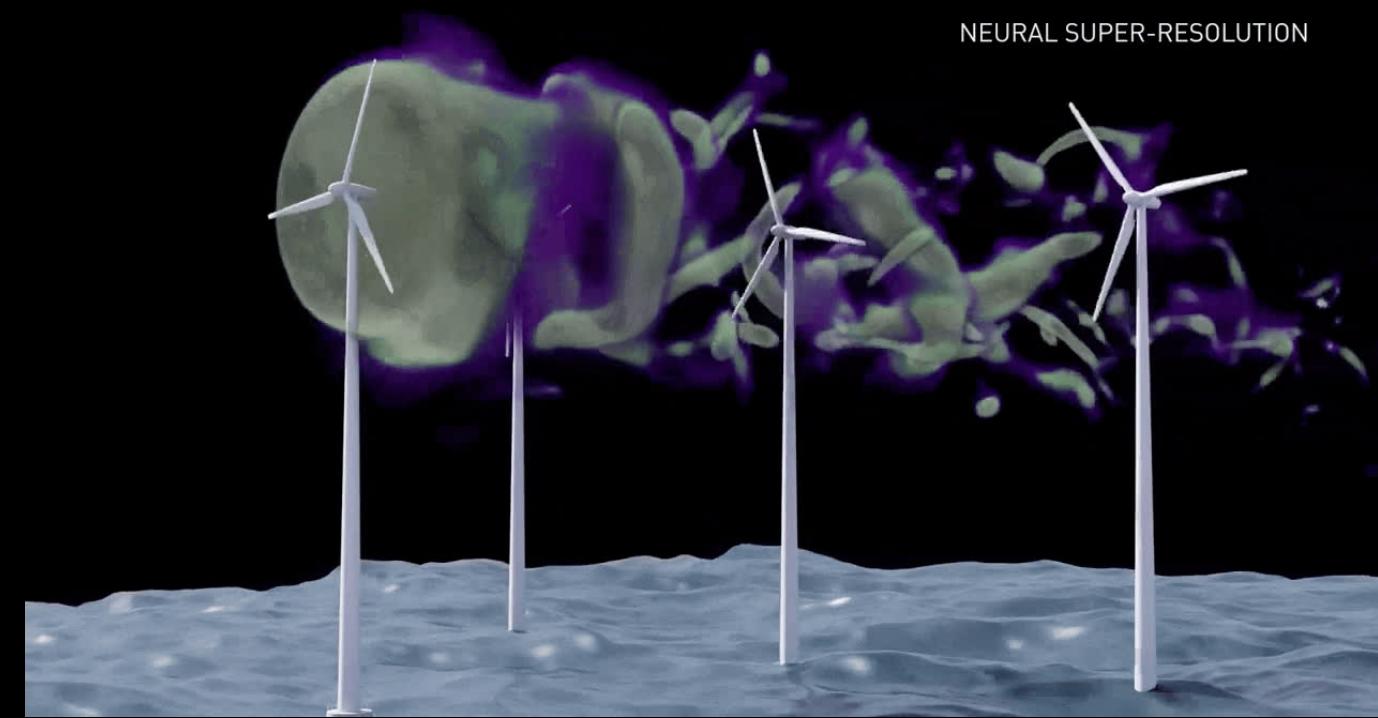
**Imagine you're designing a hydro power plant. It's critical your solution prevents future mistakes, reduces complexity and cost. Traditionally the process took years and cost millions, requiring expensive compute.**

**Siml.ai does it 10-100x faster**

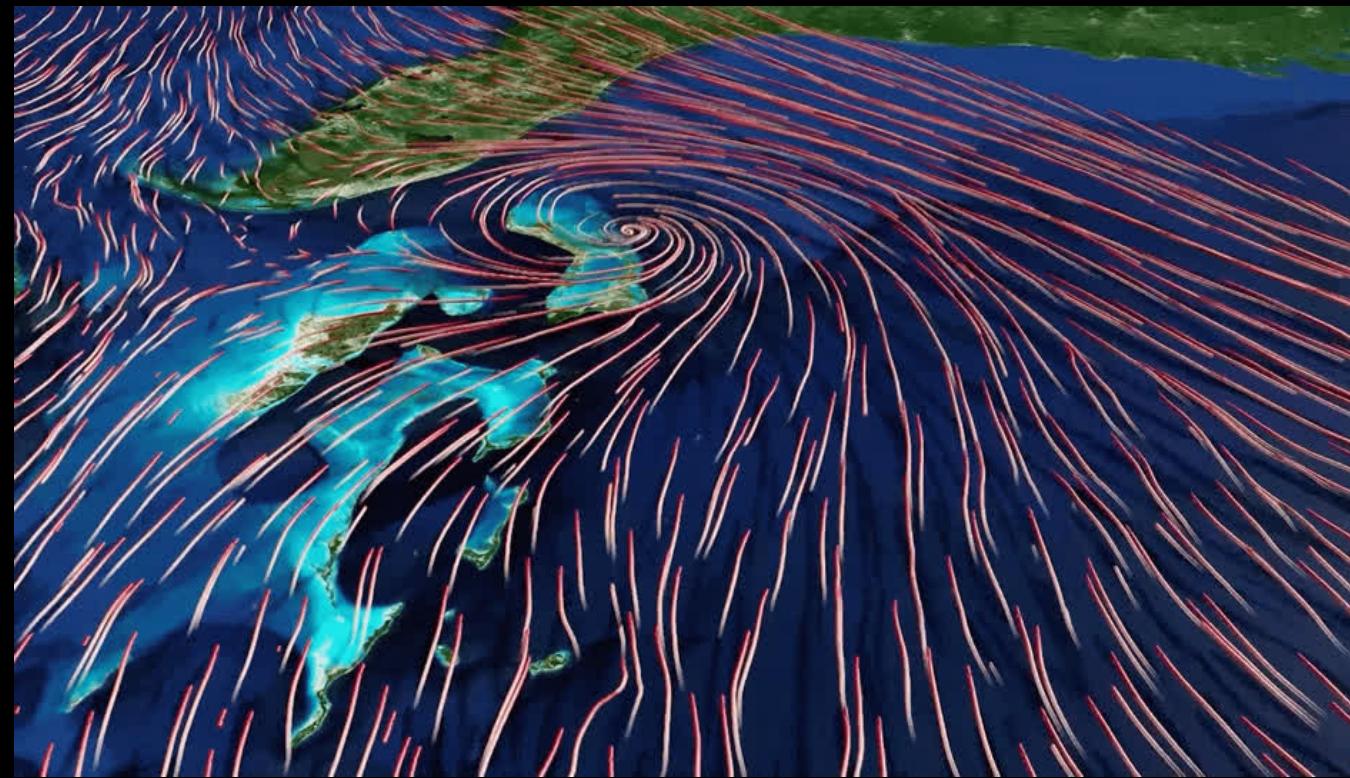


# WITH SIML.AI YOU CAN SAVE TIME & COSTS

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NEURAL SUPER-RESOLUTION



The time of virtual physics experiments is cut to

# HOURS

instead of days or weeks

With AI, simulations are up to

# 50,000x

faster

Powerful hardware is in the cloud, available in

# 1 CLICK

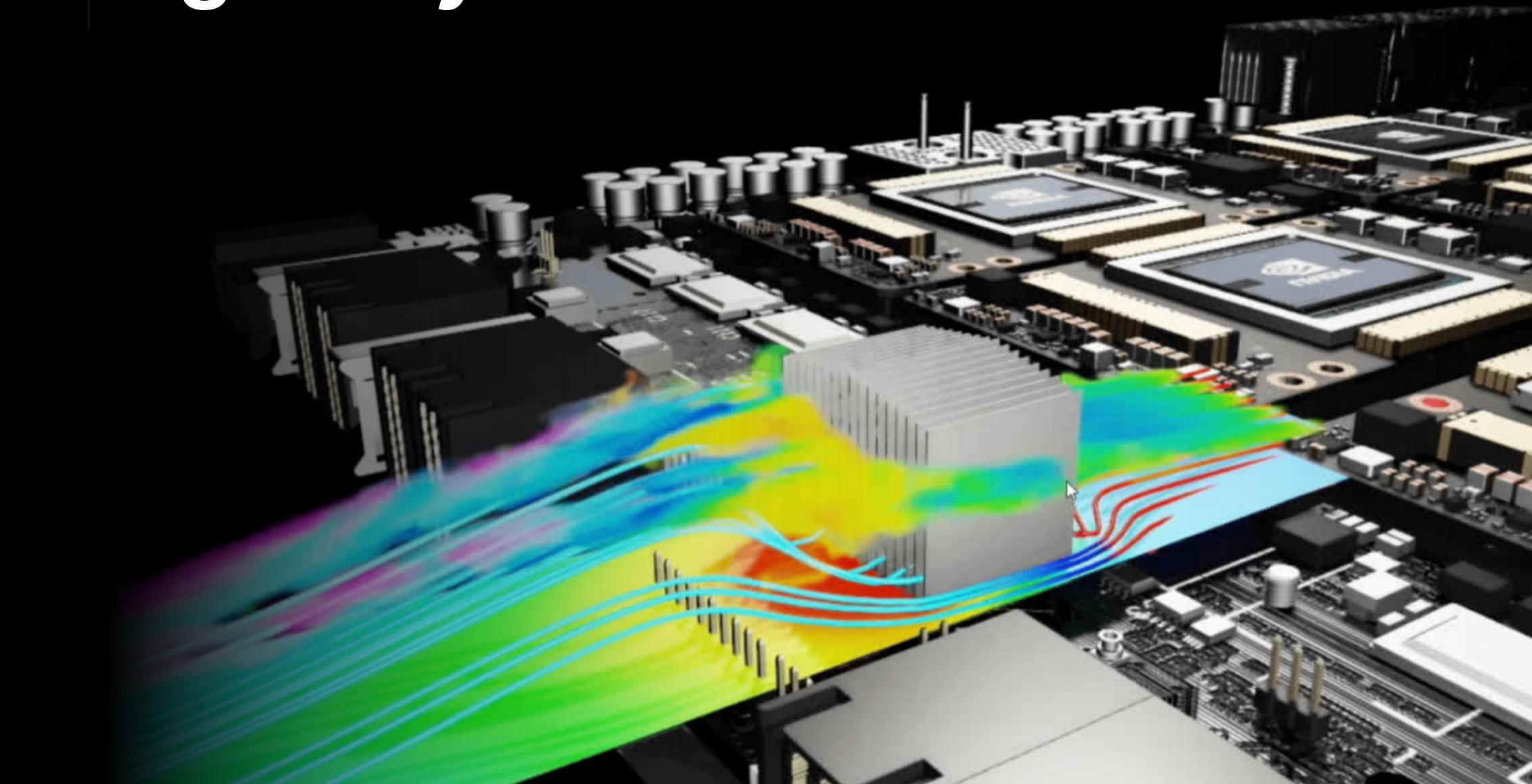
on the web-based browser



## OUR MISSION

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To democratise scientific-grade simulation tools by making it easy for **anyone** to develop physics-based simulations and deploy them in their workflows, regardless of their technical skills. By making scientific simulation almost **real-time**, **user-friendly**, and **accessible**, we want to reach all engineers and physics enthusiasts **globally**.



## S I Z E O F M A R K E T

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13.6%

51.11 B

20.96 B

**Market size value in 2023**

USD **20.96** billion

**Forecast for 2030**

USD **51.11** billion

**Growth rate**

CAGR of **13.6%** from 2023 to 2030



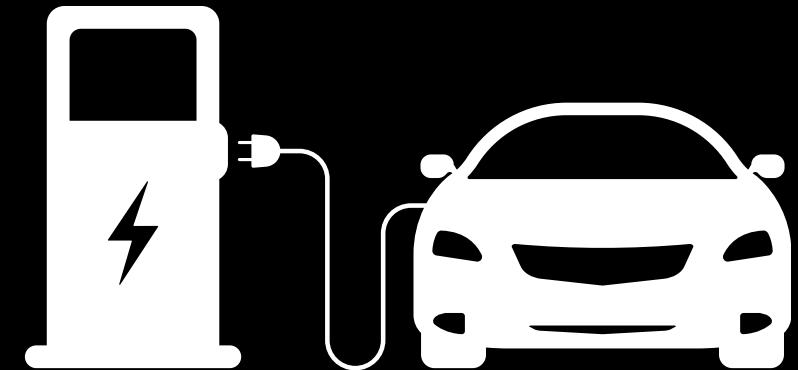
# IDEAL CUSTOMER PROFILE (FOCUS ON B2B)

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1.

Tech companies relying on  
**Computational Fluid Dynamics**  
(CFD) such as:

TESLA



2.

Consultancy companies  
providing **simulation services**  
to their clients:

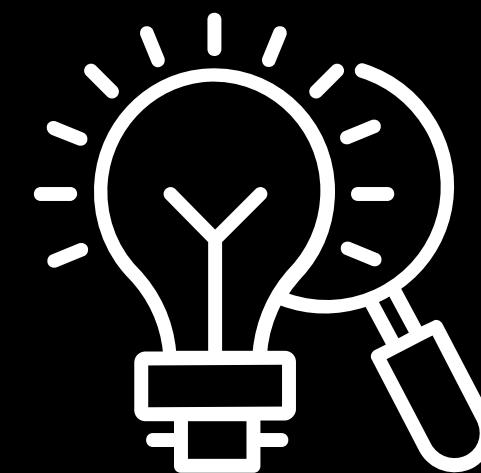
RESOLVED  
ANALYTICS



3.

Universities invested in  
**research in physics-informed**  
**machine learning**

BROWN  
UNIVERSITY



# IDEAL CUSTOMER PROFILE (FOCUS ON INDIVIDUALS)

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1.

**CFD Engineers.** Works at the engineering consultancy company or/and at the Technical University. They need a reliable, no-code, web-based, fast simulation platform. They create technical analysis about the simulated product or technology characteristics and in academic setting, they write research papers and use Siml.ai for research data.



2.

**Engineering/Physics students.** They need reliable scientific simulation software for their research papers and other practical projects. Perhaps they have access to another software through their universities, but the interface is slow and complicated, with an outdated design. They want something modern, fast, and affordable.



# COMPETITORS

Traditional CPU/GPU-based simulation software



Modern GPU-based & AI-driven simulation software



## COMSOL Multiphysics

Multiphysics, CFD, Heat Transfer and Acoustics Module

**Core license:** \$5,000+/yr

**Price per Module:**  
One-Year Term: \$4,998  
Perpetual: \$9,995

## ANSYS

Multiphysics Solver  
**\$43,000/year**

ANSYS Fluent (CFD)  
**\$29,000/year**

HFSS version 9  
**Starts at \$40,000/year**

## Monolith AI

**Data-driven** modeling with no-code AI tool, **cannot use without data**

Focusing on product/technology testing and product design optimization

Automotive, industrial and aerospace

## Navasto NAVPACK

Data-driven AI modeling through Blender/Paraview plugin, **cannot use without data**

Focus only on product design optimization

Automotive and marine

## Neural Concept

Data-driven AI modeling platform, **cannot use without data**

Heat transfer, design optimization, HVAC, structural mechanics, electromagnetics

Needs training data from simulations created in other simulation SW



# OUR CURRENT PRICES

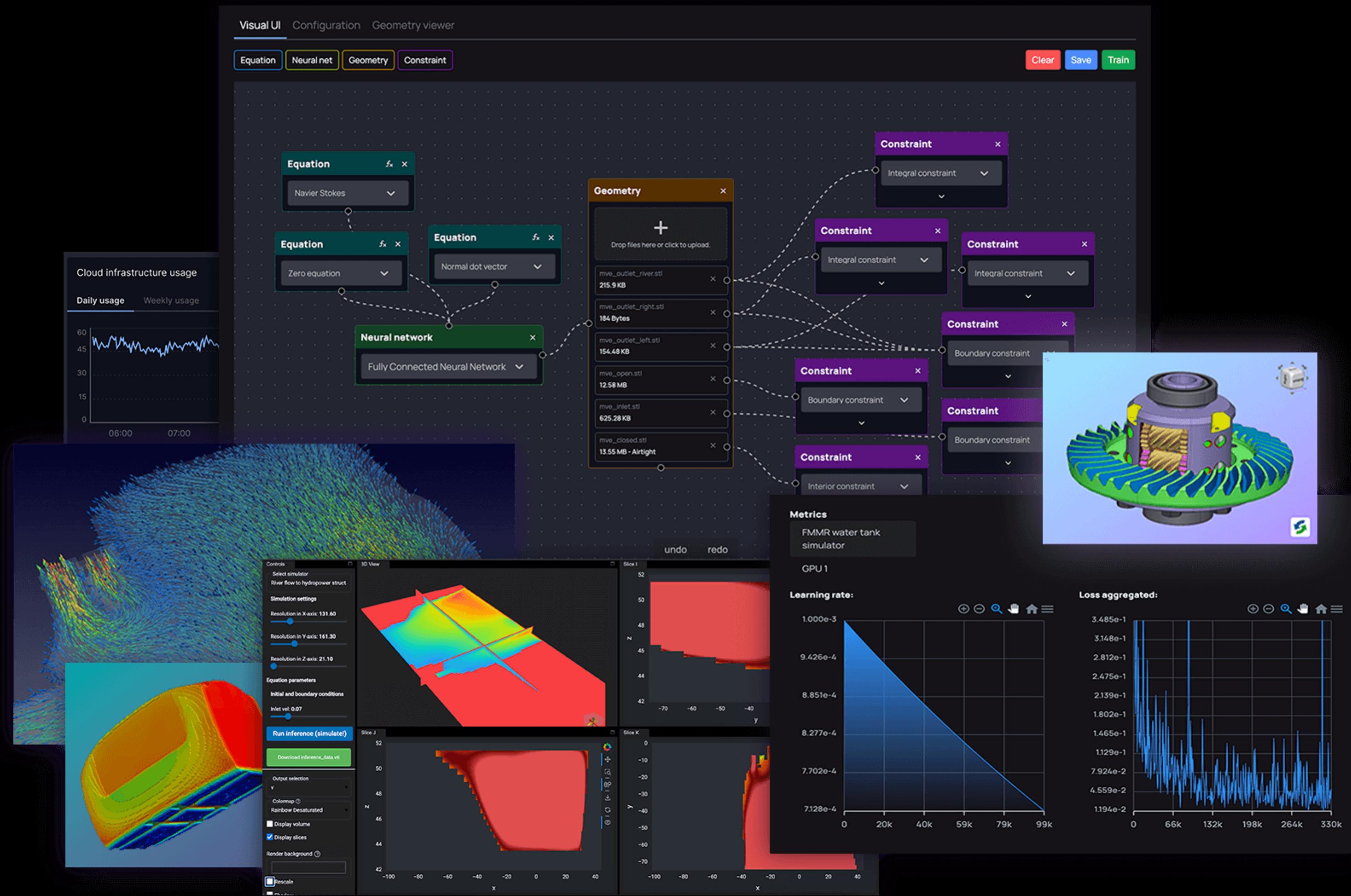
FREE	STARTER 14-DAYS TRIAL	STANDARD 14-DAYS TRIAL	PRO 14-DAYS TRIAL	ENTERPRISE
<p>ALWAYS FREE</p> <ul style="list-style-type: none"><li>Up to 3 public simulators in <a href="#">Model Engineer</a></li><li>Access limited to one Tier 1 computing resource</li></ul> <a href="#">CHOOSE PLAN</a>	<p>€199/ month</p> <ul style="list-style-type: none"><li>50GB SSD storage included</li><li>Store datasets of up to 25GB</li><li>Access up to Tier 2 computing resources</li><li>Up to 10 simulators in <a href="#">Model Engineer</a></li></ul> <a href="#">CHOOSE PLAN</a>	<p>€499/ month</p> <ul style="list-style-type: none"><li>250GB SSD storage included</li><li>Store datasets of up to 100GB</li><li>Access up to Tier 4 computing resources</li><li>Up to 20 simulators in <a href="#">Model Engineer</a></li><li>Up to 20 simulators in <a href="#">Simulation Studio</a></li></ul> <a href="#">CHOOSE PLAN</a>	<p>€999/ month</p> <ul style="list-style-type: none"><li>1TB SSD storage included</li><li>Store datasets of up to 250GB</li><li>Access of up to Tier 6 computing resources</li><li>Unlimited simulators in <a href="#">Model Engineer</a></li><li>Unlimited simulators in <a href="#">Simulation Studio</a></li></ul> <a href="#">CHOOSE PLAN</a>	<p>Have a bigger challenge to solve?</p> <ul style="list-style-type: none"><li>All features from Pro</li><li>Custom computing resources with tens of GPUs</li><li>24/7 support</li><li>Custom simulator development</li></ul> <a href="#">CHOOSE PLAN</a>

## What means “Access to Tier X computing resources”?

Running AI model training & inference workflows inside Siml.ai is billed on “**per-minute**” basis **while the server instance is running** in the cloud, **additionally** to the monthly/yearly subscription the user is paying.



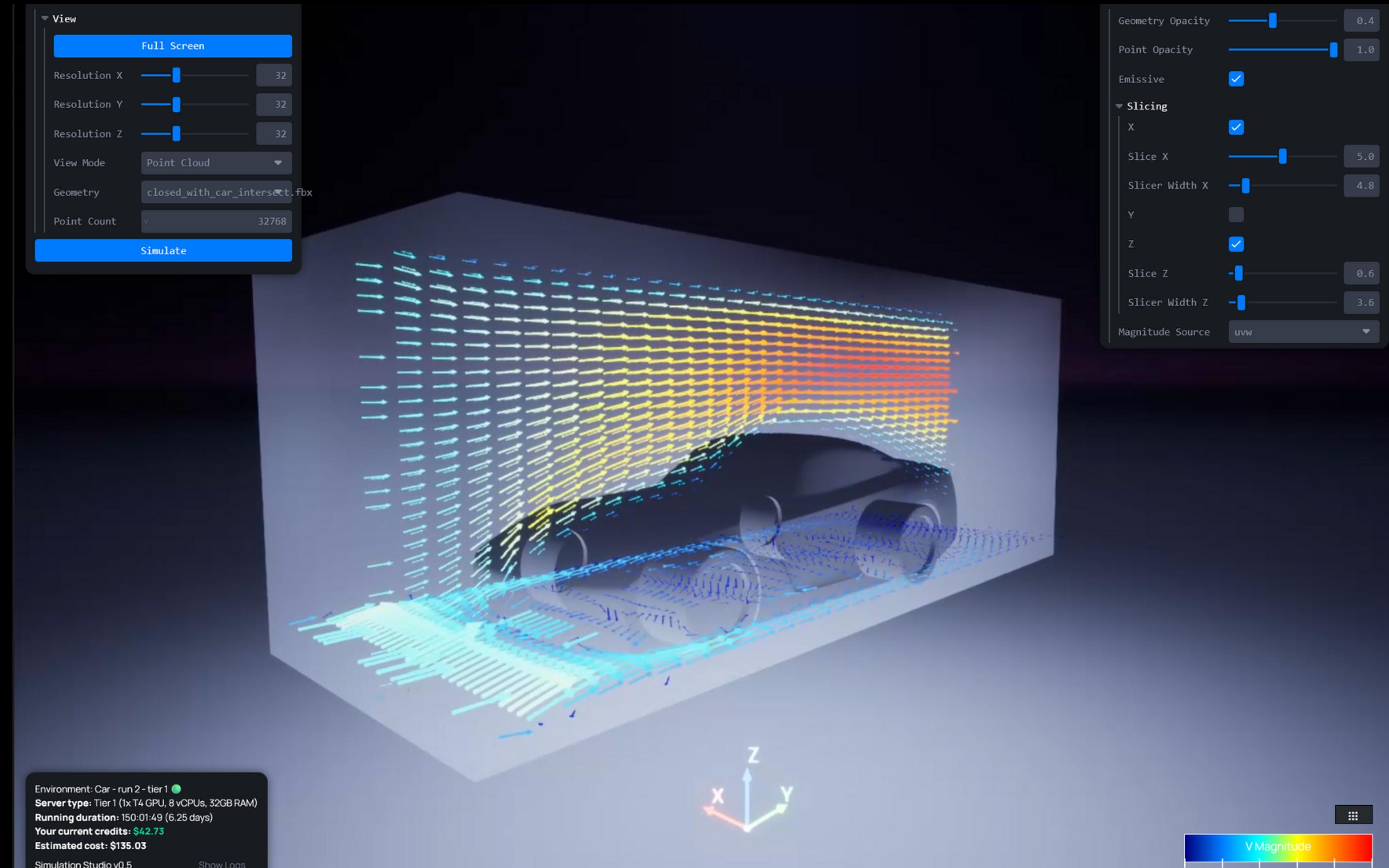
# PRODUCT / MODEL ENGINEER



- **Pre-built models** and examples
- **Bundled equations** for multiphysics, CFD, heat transfer, acoustics, seismics, electromagnetics; or **you can implement custom physics solvers yourself**
- **Easy-to-use** visual interface
- **No-code / Low-code**
- **One-click** access to robust cloud infrastructure for training AI models
- Build **interactive web apps** on top of our **Simulator Inference & Training Environment (SITE)**
- **Monitoring** dashboards
- **Dataset preparation**



# PRODUCT / SIMULATION STUDIO



- **Interactive visualization tool** for numerical simulation and virtual physics experiments
- **Explore hundreds of variations** by running **simulations in seconds**
- **Automated optimization** of complex geometries
- Fastest way to build digital twins that need **real-time physics** simulation
- Support for **virtual and augmented reality** in Q2 2024



# PILOT CLIENTS

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**RFB**  
S.r.o.

TECHNICAL UNIVERSITY  
OF KOŠICE

DimensionLab is working with **Kovohuty Krompachy** to integrate Siml.ai into their workflow to achieve **10% cost reductions of metallurgical processes (~€100k/week)** and **process time reduction under 24 hour/cycle**.

Siml.ai helps **RFB's** engineers **increase hydroplant's energy generation efficiency, optimize water structure endurance against strong floods.**

Siml.ai is being integrated into **TUKE's** software library used by their researchers for **commercial and research simulations across metallurgy, aerospace, automotive, manufacturing, material science structural mechanics, and civil engineering.**



DimensionLab team developed a PoC **AI model for near-real-time predictive maintenance** of automatic gearbox, which is **5,000x faster than AUFEER Design's proprietary MATLAB-based model.**

Siml.ai was used to create AI simulator that can **analyze 10's of insulator materials** in for **multiple temperatures within seconds, reducing the time-to-market** of Ecocapsule's new model v2.

**Takeda Pharmaceuticals** reached out to DimensionLab to develop **high-fidelity digital twin with integrated AI simulators** for **modularizing and speeding up their R&D process.**



# PRODUCT VALUE AND GROWTH

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**Data-driven AI model for predictive maintenance in the automotive industry:**

- 99.77% prediction time reduction
- 430x faster (from ~6h to 50 secs)
- 99.88% reduction in compute costs
- 98.52% energy saved, (significant reduction of CO2 trace), unlocking near-real-time iteration times for hardware analysis
- Working on a joint collaboration with Škoda

## ECOCAPSULE

**Pioneering sustainable living spaces, adaptable to diverse environmental conditions:**

- Optimized Heat Transfer in Ecocapsule v2
- Pre-trained simulator for fast experimentations with multiple material properties and outside temperatures between -25°C and +50°C
- 70% enhanced thermal efficiency
- 60% reduced energy consumption

**600+ users of Siml.ai**

**500% growth since the alpha launch on July 3rd**

**127% growth**  
in newsletter subscribers since September



# MEET THE CORE TEAM

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Co-founder & CEO

## **Michal Takac**

13+ years SW engineering experience across various SaaS / crypto / metaverse / AI startups, co-founded 4 startups. PhD in Cybernetics. Slovak Student Personality of the Year 2021 in the category of metallurgy, engineering and energy.

[/in/michaltakac/](https://www.linkedin.com/in/michaltakac/)



Co-founder & CFO

## **Peter Macinsky**

Strategic manager. Peter is a serial entrepreneur in fintech with a strong IT background. Helped to start Solar Turbines (USA) collaboration with R&D team at Ness Košice.

[/in/macinsky](https://www.linkedin.com/in/macinsky)



Co-founder & BizDev

## **Branislav Krsak**

Academic consultant in 100+ international projects, PI in 27 projects, R&D commercialization facilitator. Successful and seasoned entrepreneur with rich 20y+ experiences.

[/in/branislav-krasak](https://www.linkedin.com/in/branislav-krasak)



Co-founder & VP Eng.

## **Martin Muzelak**

Previously SW engineer at IBM. Finalist at IBM Hack 2019. 2nd place at Falling Walls Lab 2022, PhD candidate in Cybernetics.

[/in/martin-muzelak](https://www.linkedin.com/in/martin-muzelak)



Head of R&D

## **Fouzia Adjalia**

Pioneer researcher in the field of AI & robotics, ambassador for women in STEM with a particular focus on AI. Keynote speaker at major conferences.

[fouziaadjalia.com](http://fouziaadjalia.com)  
 [LinkedIn profile](https://www.linkedin.com/in/fouziaadjalia)



Senior SW Engineer

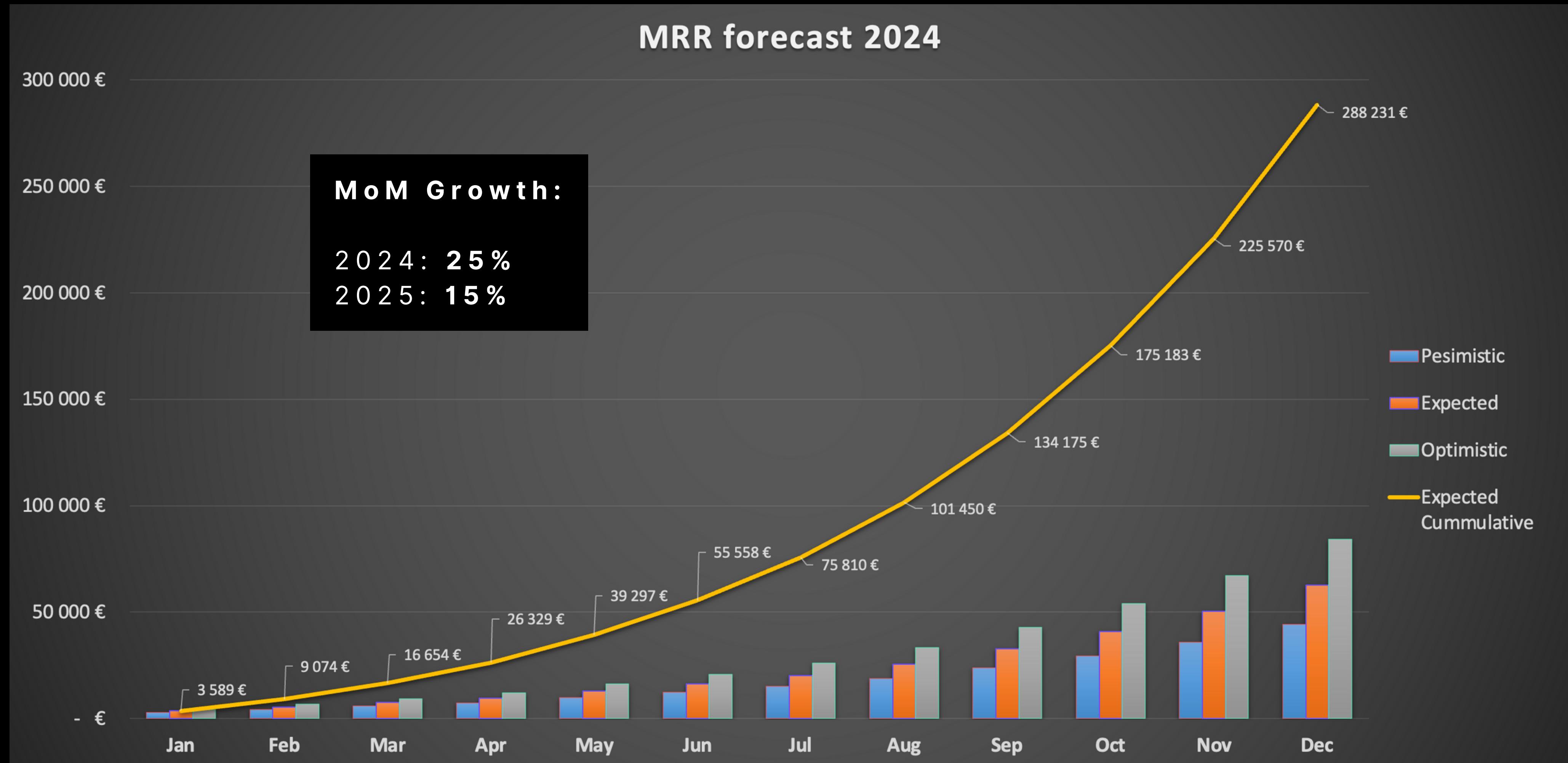
## **Maros Pekarik**

8+ years of experience in SW engineering and interaction design, specialist in virtual spaces and interactive design. Creative technologist active in robotics and immersive media art.

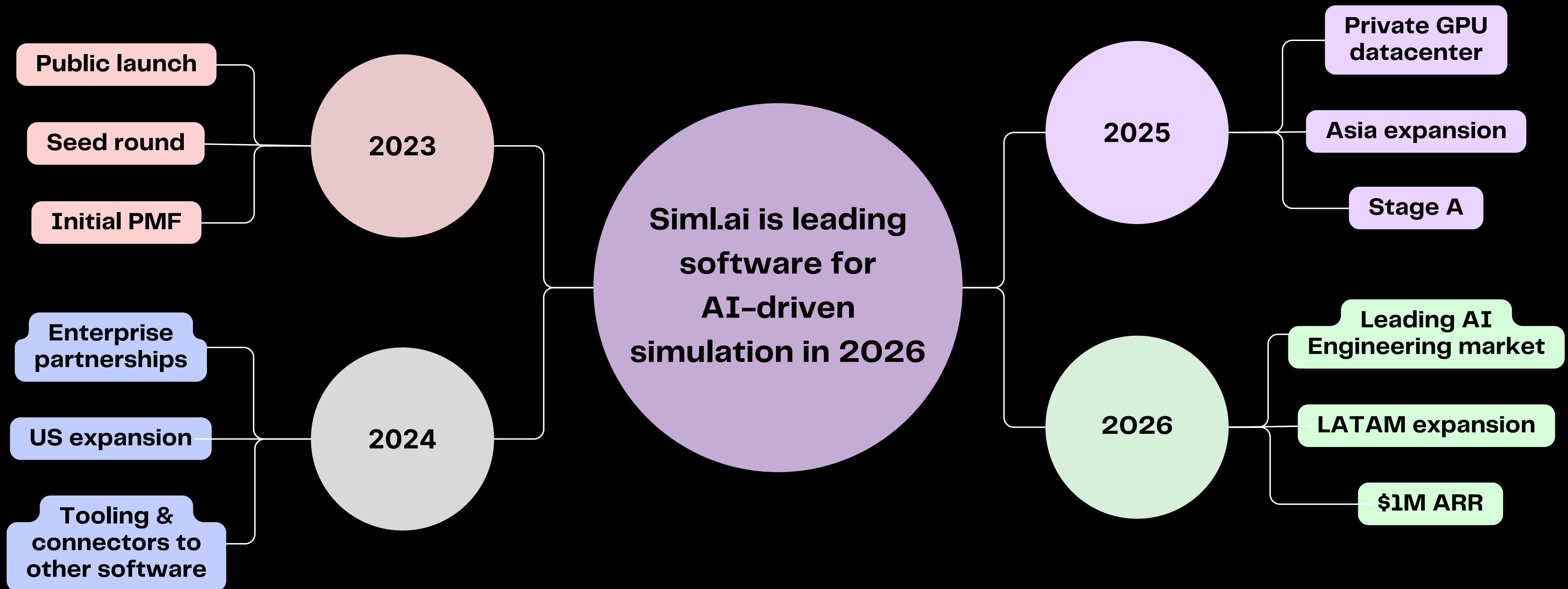
[/in/marospekarik](https://www.linkedin.com/in/marospekarik)



# FINANCIAL PLAN



# 4 - YEAR ROADMAP



# WE ARE RAISING \$2,5M SEED ROUND

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## 1. Expand team 14 → 25 team members

→ +2 sales, +2 marketing, +2 customer support, +1 design, +2 software eng., +1 R&D, +1 assistant

## 2. Establish US company for better worldwide presence

→ Dedicated Sales Rep in location of interest (Silicon Valley / Austin / NYC)  
→ US Entity establishment (Delaware C-Corp)

## 3. Siml.ai v1.0 (full release is planned for Q2/2024)

Key features:

→ Building Digital Twins with integrated AI Simulation Engine  
→ AR/VR Support for simulation inference  
→ Users can build interactive customized web apps w/ embedded AI-driven Digital Twins  
→ Connectors & integrations / plugins for connecting Siml.ai to established simulation software

## 4. Goal to reach 5k users by the end of 2024

→ 150+ paying users  
→ 30+ enterprise clients (EU & US)





# Reach us at

**michal@dimensionlab.org**

# Thank you!

Made by

**DimensionLab**

Partners



**challenger**  
ACCELERATOR

**ClimAccelerator**  
Baltics & Slovakia

**eit Climate-KIC**  
Co-funded by the European Union