Rescale: The Comprehensive Cloud Platform for Accelerated Modeling & Simulation

Rescale AI PoC Offer | Accelerated Product Development and Engineering through Generative AI

Summary
Discover the power of accelerated product development and engineering through AI-driven simulation and design optimization with Rescale.

Duration
6-8 weeks

Use case
Manufacturing: Accelerate product development and engineering through generative AI.

Your value and outcomes
Manufacturers have an immense opportunity to revolutionize product development and engineering through AI-powered engineering and generative AI, leading to faster innovation and optimized designs. Seizing this opportunity requires managing complex compute resources, ensuring data quality, and integrating AI models into existing workflows—significant challenges that can doom projects due to inadequate infrastructure and rising costs.

Rescale leverages Microsoft Azure's robust cloud infrastructure and high-performance computing (HPC) capabilities, in addition to Azure services including Azure OpenAI Service and Azure AI Foundry, to address these challenges with a unified, secure, and scalable environment for AI-powered surrogate and reduced order modeling and simulation. Through this Proof of Concept (PoC), we'll demonstrate how automated workflows, simulation metadata capture, and AI-ready data pipelines can ensure successful AI deployment and deliver measurable outcomes in product development.

Microsoft and Rescale's AI PoC program is already driving real impact for leading engineering teams—delivering massive gains in speed, efficiency, and insight. Here's what they've achieved:

- **10,000× faster with 99% accuracy:** GM Motorsports slashed CFD prediction time while maintaining precision using AI-accelerated simulation workflows on Rescale, powered by NVIDIA and Azure.
  Watch the NVIDIA GTC session ›
- **90% workflow automation:** Rimac automated the bulk of post-processing and structured simulation data for AI-readiness—turning disorganized data into labeled, model-ready assets.
  Hear more from Rimac at NAFEMS ›
- **Milliseconds instead of hours:** Intelligent Energy cut preprocessing from 8 hours to milliseconds and slashed simulation runtimes from 24 hours to milliseconds—enabling real-time feedback and accelerated design.
  Read the Intelligent Energy case ›
- Ready to prove what AI can do for your engineering team? Start your PoC with Rescale and unlock the next level of speed, scale, and innovation.

Service type
Proof of Concept

Deliverables
- PoC design and detailed plan outlining the scope, objectives, and success metrics for the engagement.
- Initial AI model training and inference demonstrating an AI model trained on your simulation data and performing predictions.
- Performance benchmarking through a comparative analysis showcasing AI acceleration and efficiency gains against traditional methods.
- Comprehensive technical validation report detailing findings, outcomes, and recommendations for full-scale adoption.
- Knowledge transfer session with your team to review the PoC results and discuss next steps.

Activities
- Collaborate to define PoC scope, identify key data sets, and prepare simulation data for AI model training.
- Utilize Rescale's platform to train and deploy a surrogate AI model using your existing simulation data.
- Run AI inference predictions and conduct initial validation against high-fidelity simulations.
- Analyze PoC results, prepare final report, and present findings and recommendations.

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The Rescale difference
Rescale is a recognized leader in AI-powered cloud HPC, enabling innovation for organizations worldwide. Our platform provides the world's largest library of fully managed software applications, performance-driven computing architectures, and robust data security and intelligent controls.

We specialize in accelerating product development and engineering through AI-driven simulation, with proven success in industries including Automotive, Aerospace, and Manufacturing. Our unique approach focuses on leveraging existing simulation data to train and deploy surrogate models.

www.rescale.com

Customer reference - GM Motorsports
Milliseconds matter in Formula One racing, and GM Motorsports, the racing arm of General Motors, set out to cut R&D cycle times with the same uncompromising spirit that its team brings to the track.

Working with Rescale and leveraging Microsoft Azure and Azure AI, GM Motorsports' engineers were able to evaluate designs 1,000x faster, achieving 98% accuracy compared to traditional computational fluid dynamics (CFD). While achieving these gains, they also improved computing resource efficiency by 85%.

Pricing
We offer customized pricing based on your organization's specific scope and requirements. Please contact us for a detailed proposal and quote.

Industry: Manufacturing

Category: Consulting

Sub-category: AI-powered Simulation, Product Development, Engineering Optimization, Simulation Data Management

Competencies:

- High-Performance Computing (HPC)
- Simulation & Modeling

Ready to see what AI can do for your organization? Contact us for a detailed proposal and quote to start your PoC with Rescale and unlock the next level of speed, scale, and innovation.