

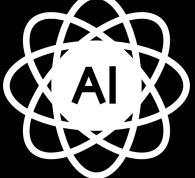
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# Designed by & for CAE Engineers

Request a Demo

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DEP MeshWorks has long accelerated model creation, iteration, and exploration — whether manual or automated.

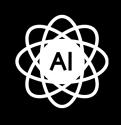
With the new MeshWorks AI/ML platform, the editor Detroit Engineered Products extends this advantage to simulation itself, providing a powerful alternative to traditional solvers.

The result: the entire process — from modeling to computation and optimization — can now be completed in a fraction of the time, saving months of effort across any industry.





# MeshWorks





# DEP MeshWorks AI/ML Platform Key Strengths



## **Trust & Transparency**

PINNs and Equivalence Score ensure reliable, explainable, and validated results.



#### **Data Generation & Enrichment**

Easily create and expand datasets through morphing, parameterization, and DOE capabilities.



### **Data Sovereignty**

Model training can be fully performed within customer internal network.



### **Solver Compatibility**

Seamless integration with main solver formats via MWInput and MWPlot.

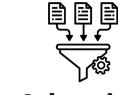


#### Immediate Value

Fast prediction, broader design exploration, and significant cost reduction.



**Data** Generation



# **Adaptive Training**



# **Performance Predictor**



# **Auto Parametrizer**



# **Optimizer**

CAF parameterization to enrich existing legacy databases and rapidly generate a fleet of design variants. Run simulations to build a comprehensive database of results.

Training proprietary models based on enriched dataset, using Physics-Informed Neural Networks (PINNs) and an adaptive toolset ensuring predictor reliability.

Using trained models to accurately predict product performance — an instant alternative to traditional solvers during early design phases.

Direct geometry & property modification for interactive design exploration, with immediate evaluation of performance impact.

Autonomous design exploration by coupling the Auto Parametrizer with the Performance Predictor, enabling fast convergence toward the optimal design.