



Complete AI/ML Mission with MLSteam

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MyelinTek Inc.

AI Machine Learning Training System / AI Machine Learning Inference System
Large-scale System Design and Implementation

MACHINE LEARNING



Milestone

2017 ~ 2020

ITRI (Industrial Technology Research Institute)

AI training optimization of deep learning models

2020 ~

MyelinTek Inc.

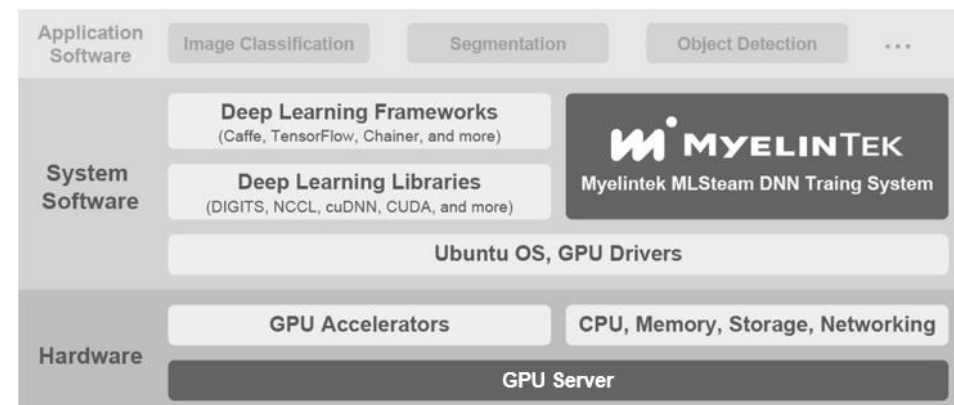
Spun-off from ITRI

Established MyelinTek in Hsinchu

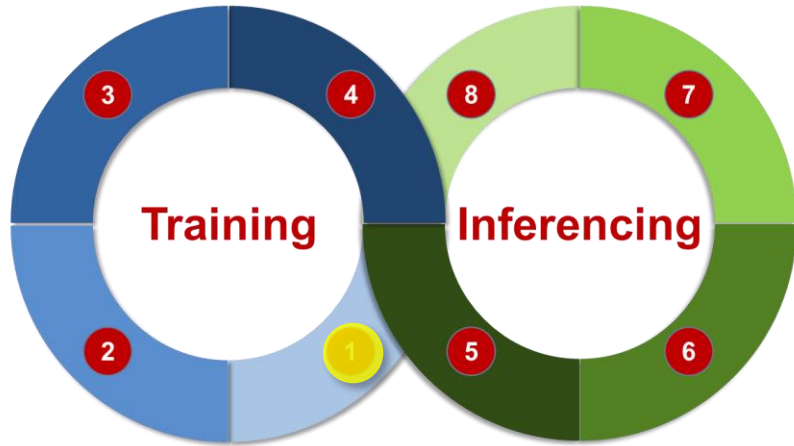


Our Mission

Provide an MLOps platform for the fast-evolving AI ecosystem. The AI developers would focus more on its knowledge domain, without spending extra time and cost on building the environment, and effectively managing training data and models, including data annotation, model development, model serving, model retraining, etc., and then practice AI life cycle management.



AI/ML Workflow (MLOps)



1. Data Preparation
2. Model Design
3. Model Training
4. Model Evaluation
5. Model Deployment
6. Model Operation
7. Performance Monitoring
8. Data Correction

Research & Development → Operation & Application



Automotive



Healthcare



Manufacturing

Simultaneous Interpreting,
Work Safety etc...

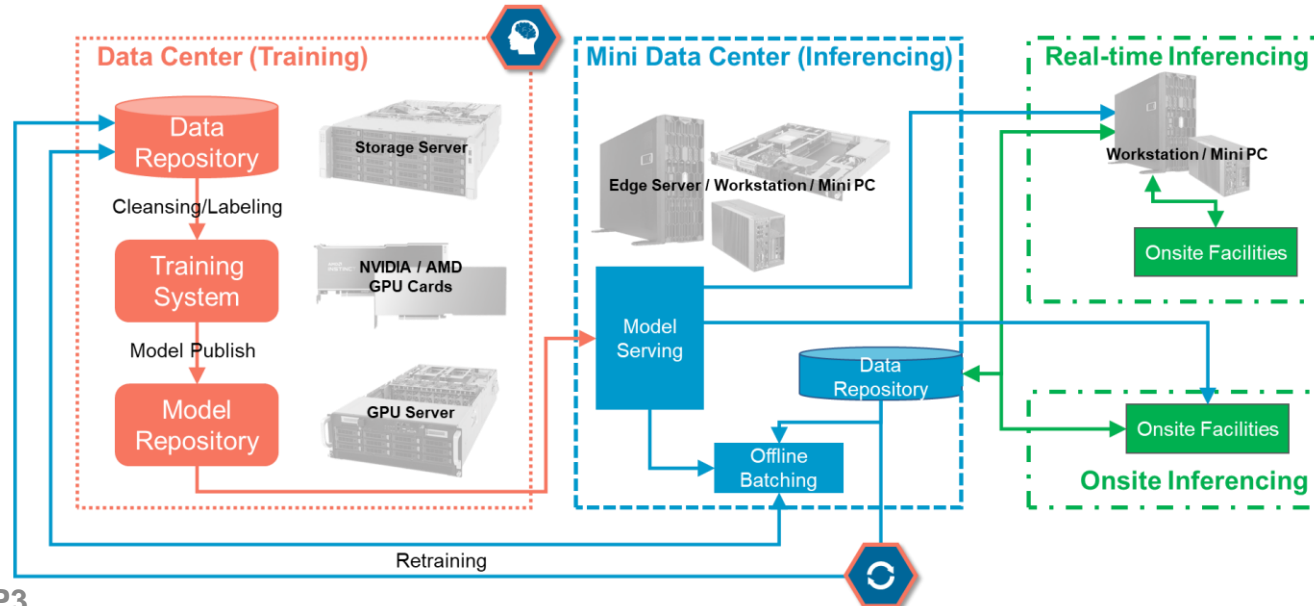


Sport science



Cloud AI Service

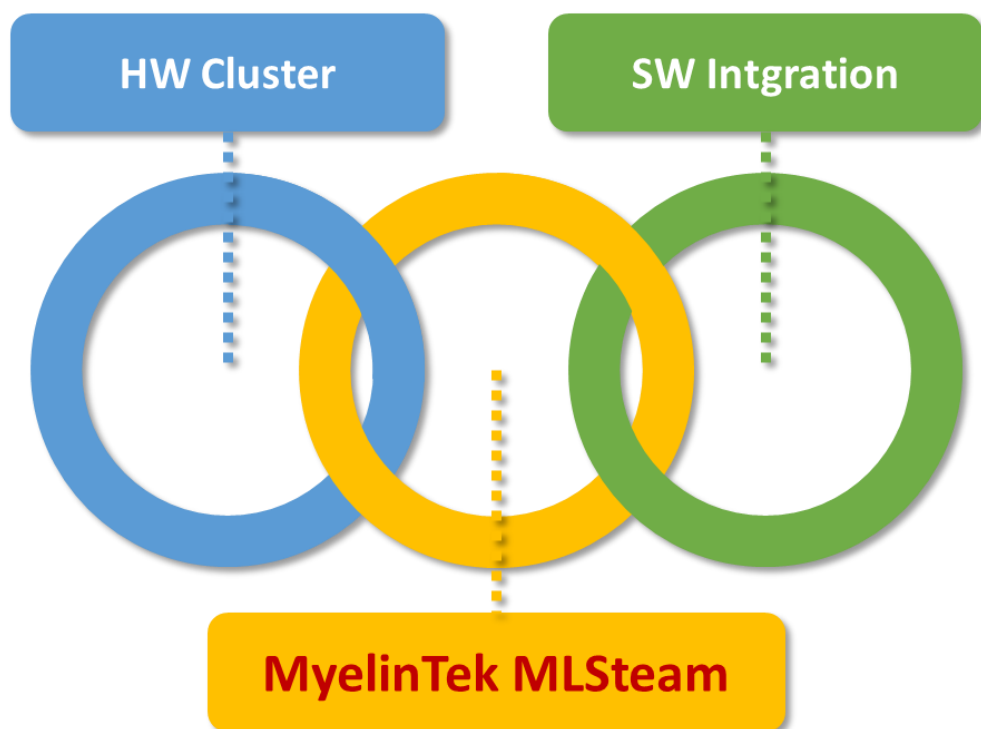
**Where AI is,
MyelinTek is in**



- **Data Center** – Training AI models for various applications, **heavy GPU computing** requirement
- **Mini Data Center** – **Light GPU computing**, for centralized inferencing from the front sites
- **Real-time Inferencing** – **Light GPU computing**, for real-time inferencing instead of centralization



AI Training Orchestration



HW Cluster –

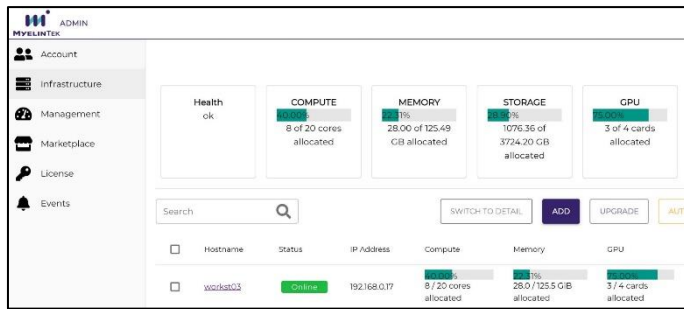
- All **x86 servers** are supported
- Multi-node cluster – Making all servers **a resource pool**
- HW management, monitoring, allocation – **Maximizing utilization**

SW Integration –

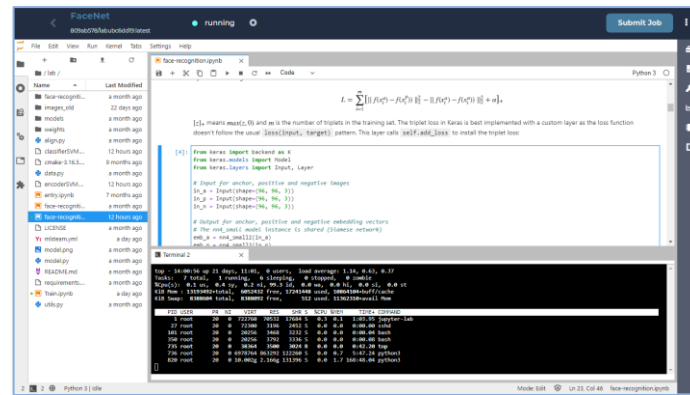
- Integrate SW needs during development – **data processing and model training tools**
- Create developing environment – user-friendly on **adjustment of model design**
- Complete MLOps – **semi-auto retraining**

A One-stop Training Platform

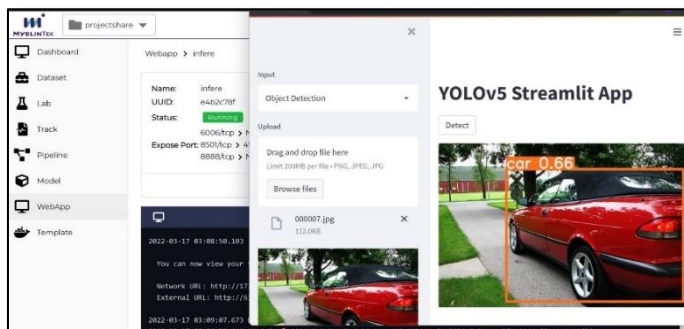
All your needs are integrated within 1 screen



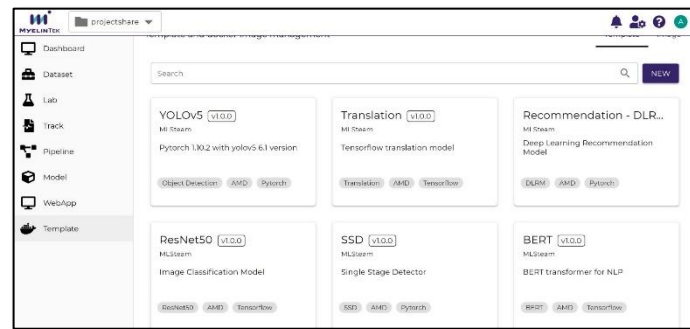
HW management, monitoring, allocation



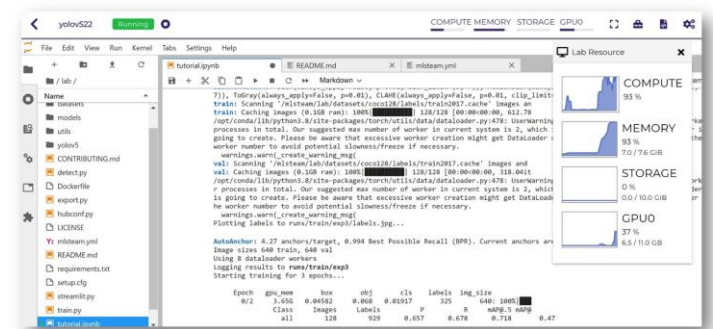
Embedded frameworks, editor



Embedded development tools

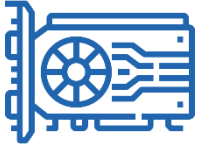


Embedded trained models



Embedded trained models

A MLSteam Quick Guide



Resource Management

- Maximize resource utilization
- Resource monitoring
- User group management
- Project management
- GPU cluster resource pool and scheduling
- User management by resource spec and plan



Quick Start Model Development

- Prebuilt model sample
- Training job monitoring
- Development in lab with widgets
- Parallel training and monitoring jobs
- Training job scheduling with hyperparameter injection



Diverse Dataset and Annotation Format

- Labeling tool modules
- Intuitive file base dataset management
- Visualized modules (YOLO bounding box)



Easy to Reproduce Model

- Lab template
- Model pipeline (low code, no code)
- Versioning everything, such as environment, code, data, hyperparameter, model etc...
- Link training Input to output model



All-in-one IDE environment

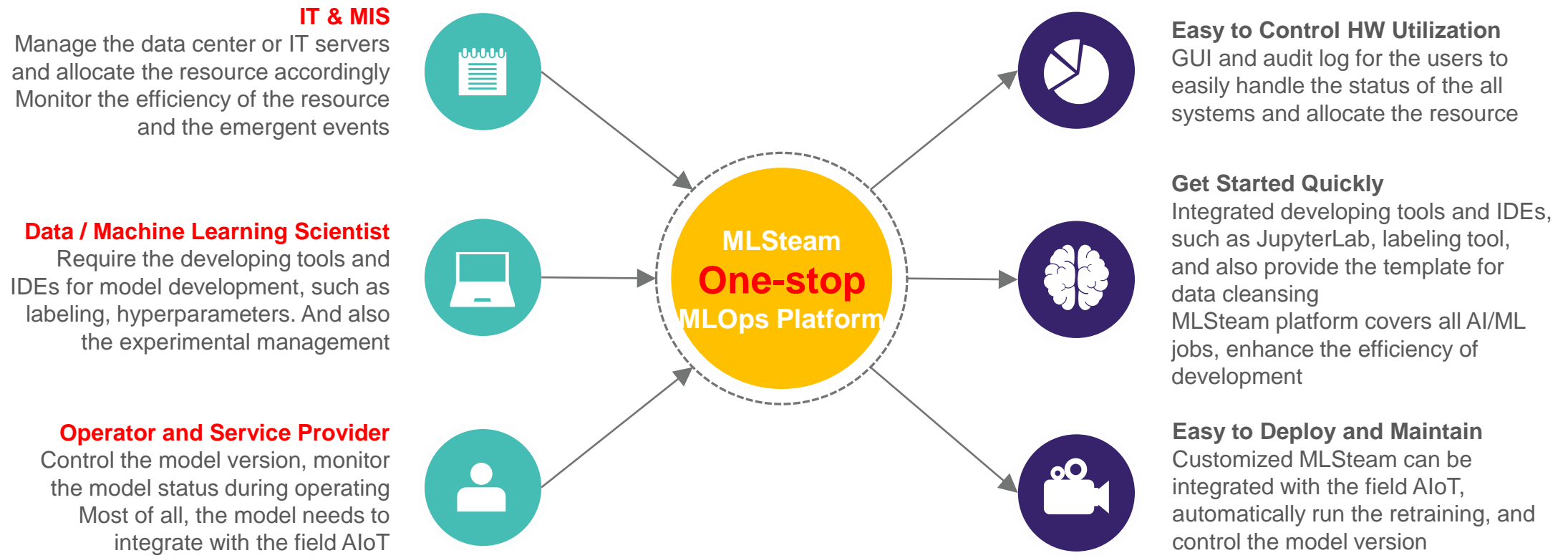
- JupyterLab
- PyTorch, TensorFlow, TensorBoard
- Remote access



Fast Reaction on Field Deployment

- Fast model deployment as inference endpoint
- Monitoring models inferencing performance

MLSteam Target Audience



MyelinTek MLSteam
You focus on your AI mission
We handle the AI environment for you

MyelinTek Service SKU

<div>AI/ML Platform</div> <div>MLSteam Software</div> <div>-</div> <div>-</div> <div>-</div> <div>Software</div>	<div>Well-integrated</div> <div>MLSteam Software</div> <div>Hardware Servers</div> <div>-</div> <div>-</div> <div>Appliance</div>	<div>Specific Application</div> <div>MLSteam Software</div> <div>Hardware Servers</div> <div>Trained Models</div> <div>-</div> <div>Solution</div>	<div>Cloud Service</div> <div>MLSteam Software</div> <div>Hardware Servers</div> <div>Trained Models (Opt.)</div> <div>Cloud Service</div> <div>Cloud</div>
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Successful Stories

02

Centralized Inferencing in Medical Center

- Large-scale system design and implementation
- **Software + Hardware**
Provide GPU servers with MLSteam



01

Smart Manufacture of Defense Department

- Large-scale system design and implementation
- **Software + Hardware**
Provide GPU servers with MLSteam
- **Software appliance**
Integrated with AMD and NVIDIA GPU servers, and storage servers, e.g. NAS, Pure Storage

03

Electronic Toll Collection Company

- Intelligent transportation
- **Software appliance**
Integrated with existed GPU servers
- **AI/ML solution**
Data processing and AI model design consultant
- **Well-rounded MLOps solution**
Model training + Inferencing + Model retraining



Thank You

You Focus on Your AI Mission
We Handle the AI Environment

www.myelintek.com

