ModAstera Inc.

Accelerate medical AI development for 10X impact

ModAstera

Building a Future of Medical AI

ModAstera is a Tokyo-based startup offering a powerful platform that dramatically streamlines the development and deployment of medical AI. With MAEA, our proprietary Medical AI Engineering Agent, we automate everything from data processing to model building, compliance, and deployment, cutting development costs by up to 90% and enabling rapid creation of high-quality AI with no-code to full-code flexibility.

Problems

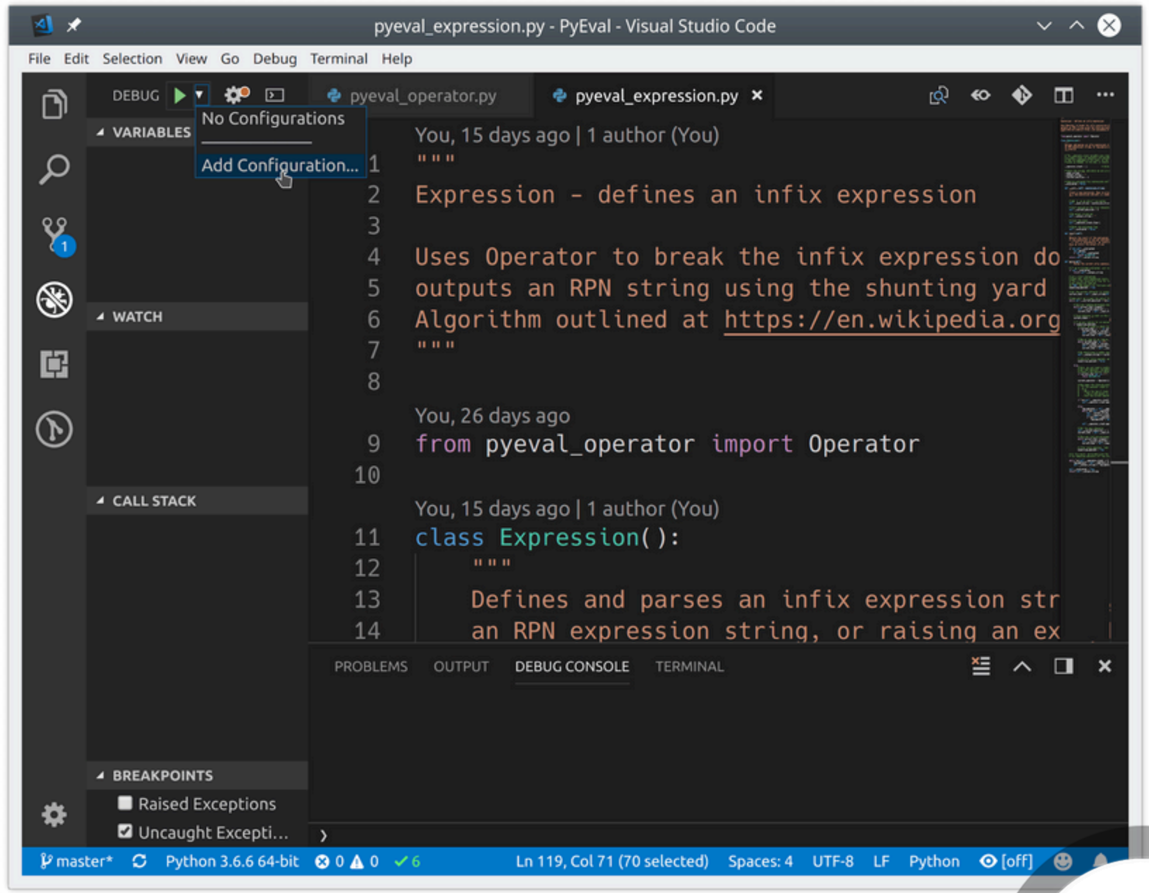
High Cost of starting and running AI projects

- From defining the solution to hiring engineers, the time and financial resources required across numerous processes are substantial.
- Typical Project Cost range: $150,000 - $500,000
- Development times for custom medical AI models can range from 6 months to several years through traditional development channels.

OpenXCell

Problems

Complicated solutions for domain experts


pyeval_expression.py - PyEval - Visual Studio Code
File
Edit
Selection
View
Go
Debug
Terminal
Help
DEBUG
No Configurations
Add Configuration...
pyeval_operator.py
pyeval_expression.py
VARIABLES
WATCH
CALL STACK
BREAKPOINTS
☐ Raised Exceptions
☑ Uncaught Excepti...
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
master*
Python 3.6.6 64-bit
0
0
✓6
Ln 119, Col 71 (70 selected)
Spaces: 4
UTF-8
LF
Python
[off]

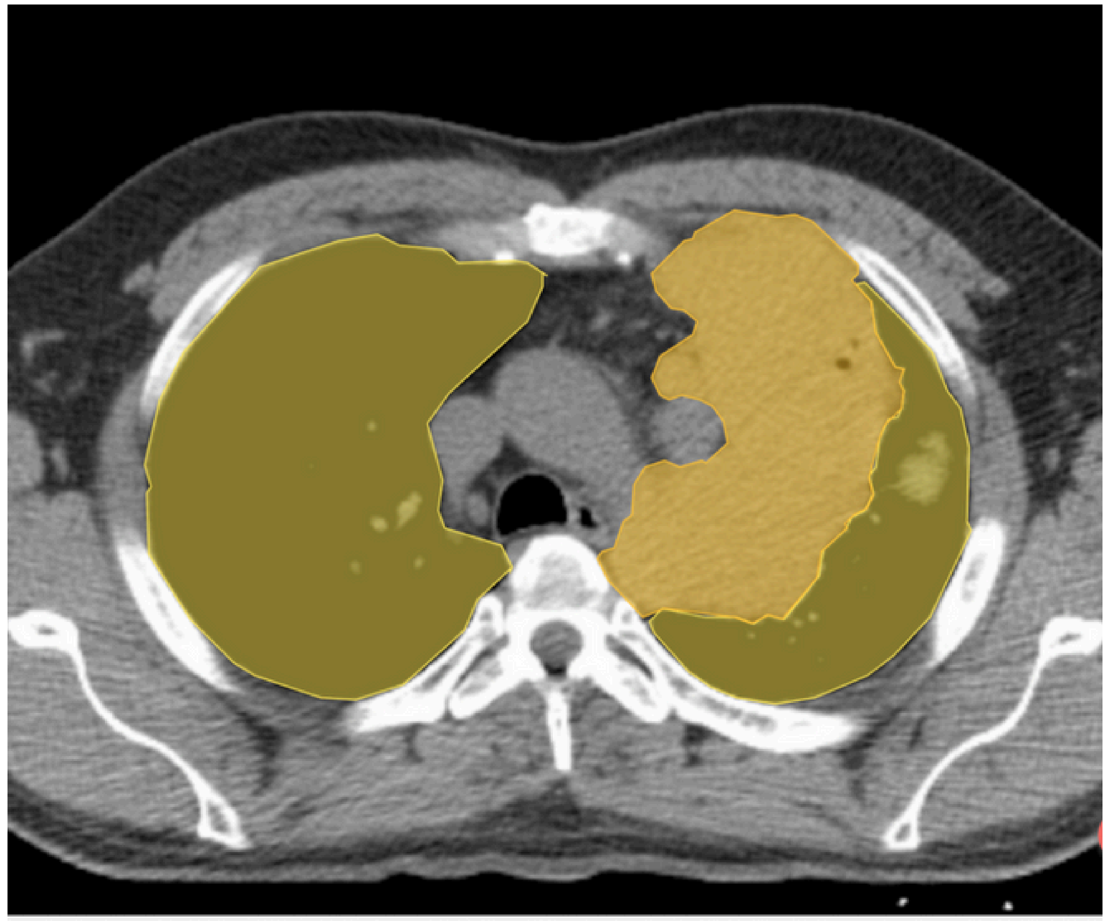
```
You, 15 days ago | 1 author (You)
"""
Expression - defines an infix expression

Uses Operator to break the infix expression do
outputs an RPN string using the shunting yard
Algorithm outlined at https://en.wikipedia.org
"""

You, 26 days ago
from pyeval_operator import Operator

You, 15 days ago | 1 author (You)
class Expression():
    """
    Defines and parses an infix expression str
    an RPN expression string, or raising an ex
```

- Medical professionals have the insights, but current AI developing tools require skills they weren't trained to use.
- There are a number of large firms pursuing medical AI, but their solutions are rarely streamlined or efficient enough for effective custom usage.

Binariks

Problems

Data preparation is time-consuming, slow and error prone, leading to poor AI models

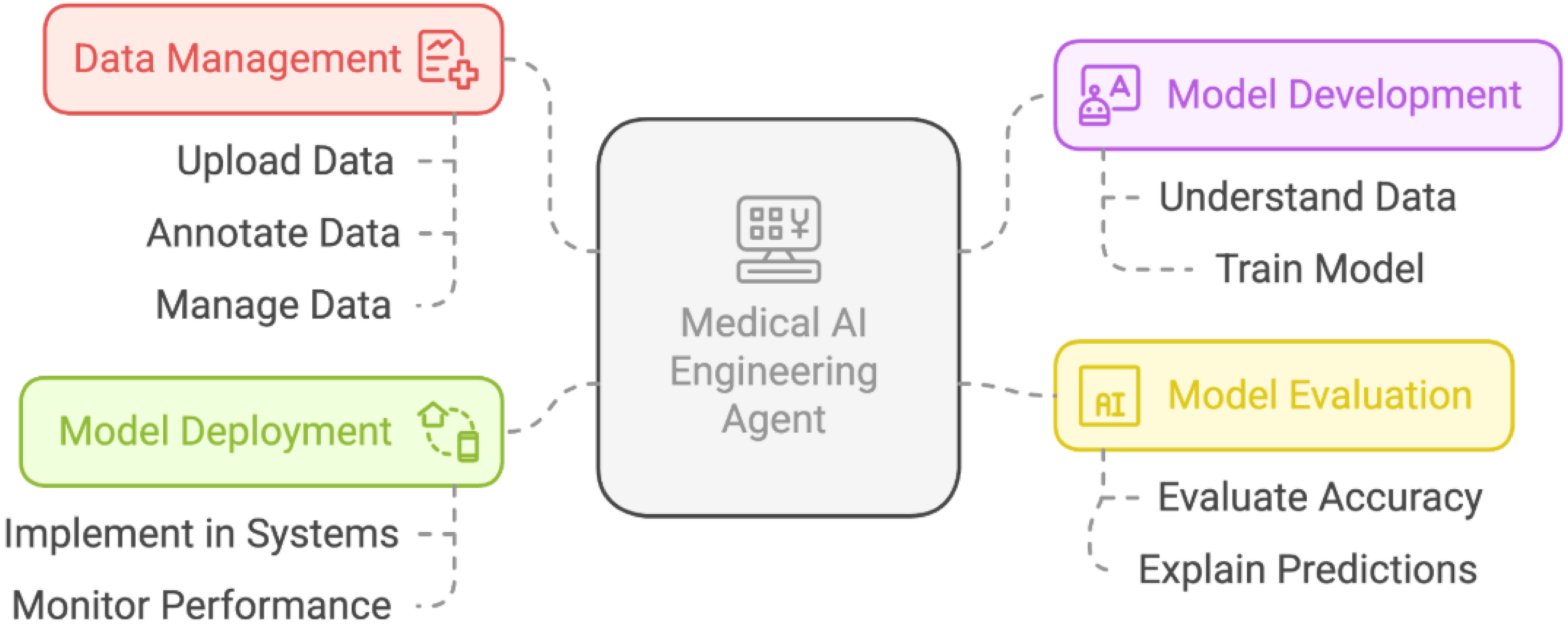


- Data preparation for medical AI often requires precise annotation and segmentation, which is an extensive process.
- Accurate and high quality annotation is time-consuming.

Springer Nature

Solution

End-to-end platform with MAEA: Medical AI Engineering Agent



Medical AI Engineering Agent

Data Management
- Upload Data
- Annotate Data
- Manage Data

Model Deployment
- Implement in Systems
- Monitor Performance

Model Development
- Understand Data
- Train Model

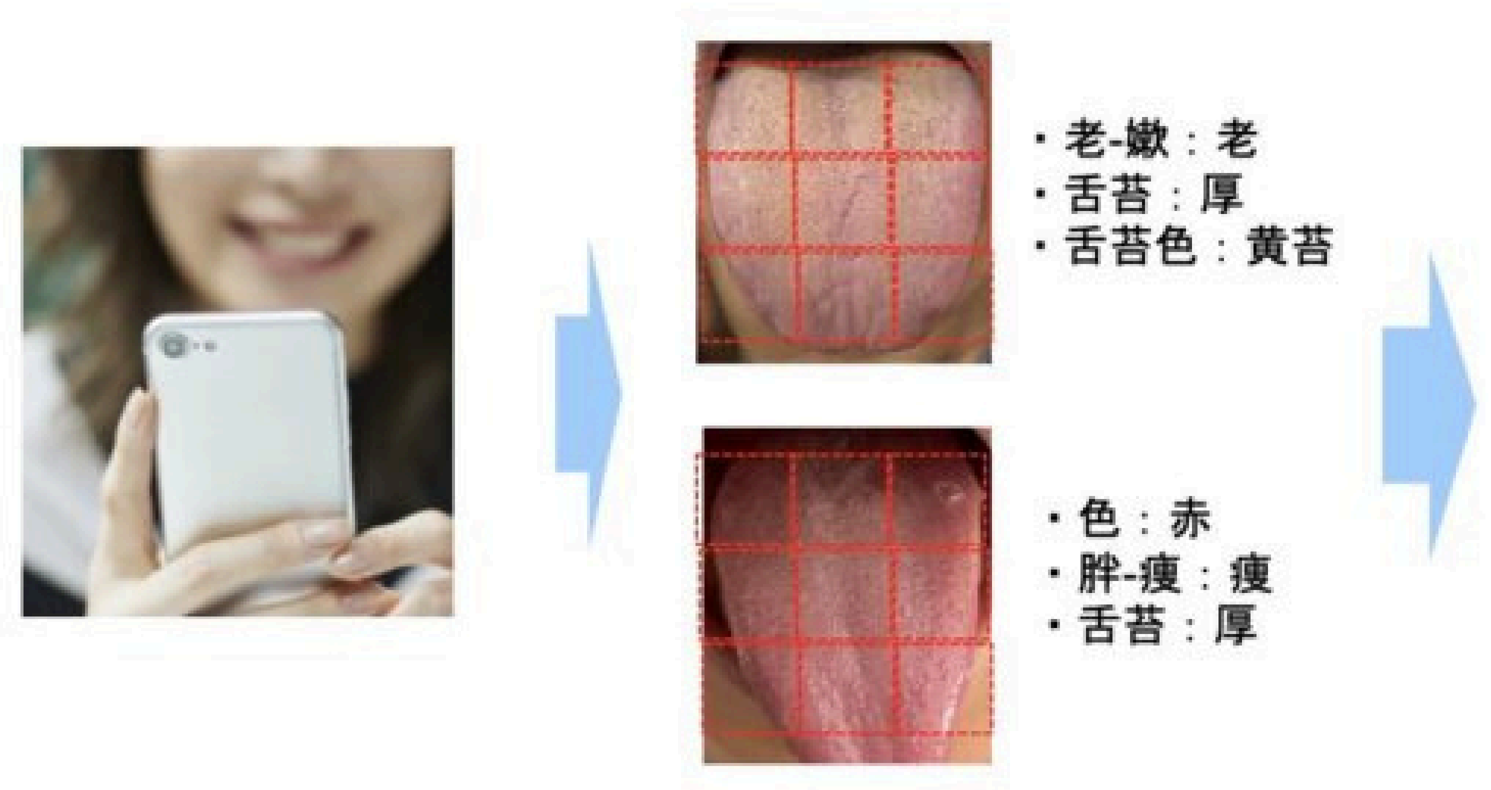
Model Evaluation
- Evaluate Accuracy
- Explain Predictions

- **AI model development with natural language**
- **Automated model design, training, validation, and deployment**
- **Accelerated R&D cycle from months to days**
- **Up to 90% cost savings**

Use Cases

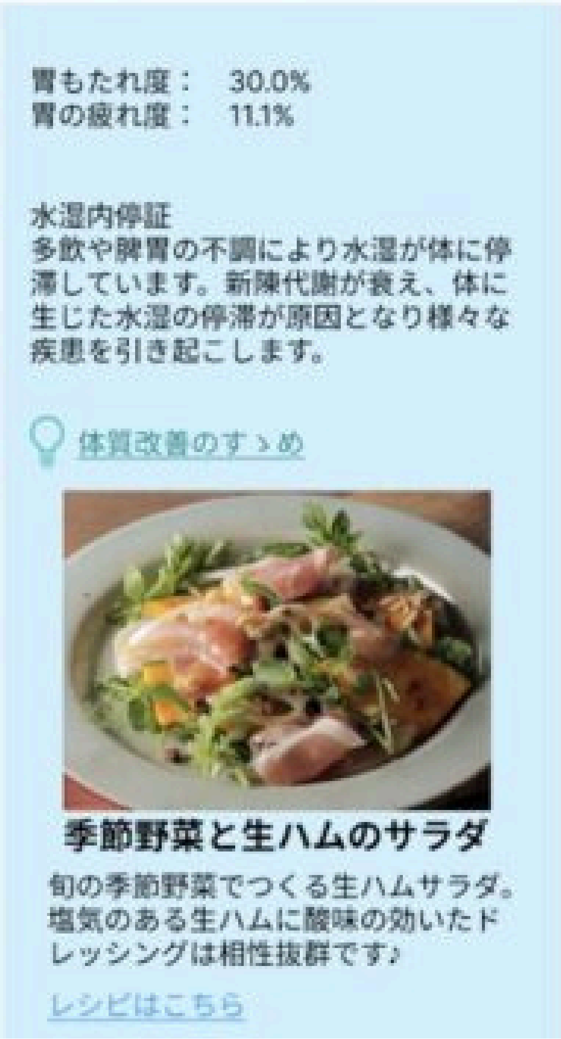
Accelerated Time-to-deploy

ModAstera



・老-嫩：老
・舌苔：厚
・舌苔色：黄苔

・色：赤
・胖-痩：痩
・舌苔：厚



胃もたれ度：　30.0%
胃の疲れ度：　11.1%

水湿内停証
多飲や脾胃の不調により水湿が体に停滞しています。新陳代謝が衰え、体に生じた水湿の停滞が原因となり様々な疾患を引き起こします。

体質改善のすゝめ

季節野菜と生ハムのサラダ

旬の季節野菜でつくる生ハムサラダ。塩気のある生ハムに酸味の効いたドレッシングは相性抜群です♪

レシピはこちら

Project:

- Mobile application for predicting body composition from tongue images

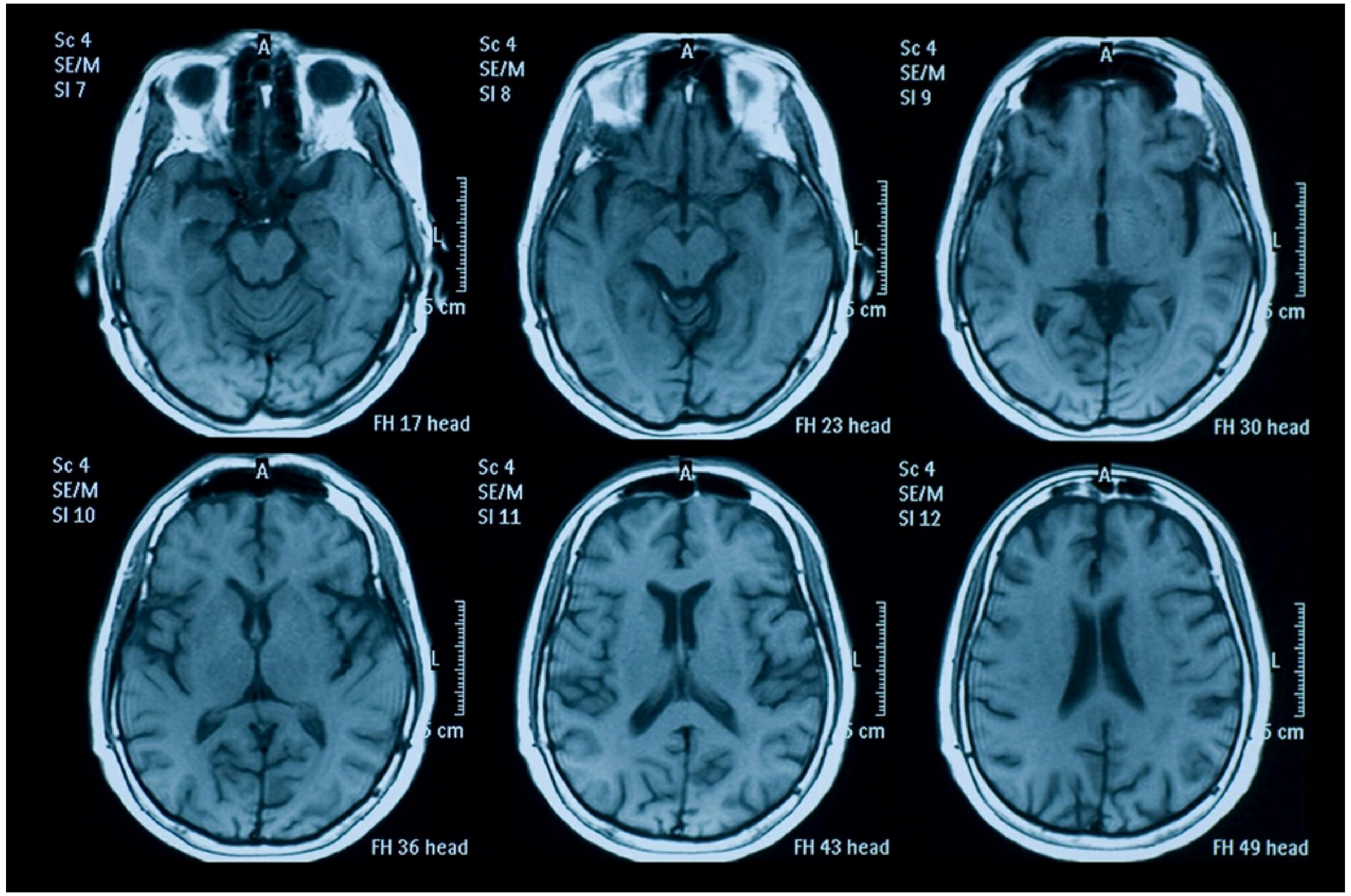
Outcomes:

- Over 90% model accuracy
- Model ready for deployment in 30 days
- Over 60% cost savings

PULSEC

Use Cases

Research and Model Prototyping


Sc 4
SE/M
SI 7
FH 17 head
Sc 4
SE/M
SI 8
FH 23 head
Sc 4
SE/M
SI 9
FH 30 head
Sc 4
SE/M
SI 10
FH 36 head
Sc 4
SE/M
SI 11
FH 43 head
Sc 4
SE/M
SI 12
FH 49 head

Project:

- Model for predicting age and lifestyle from brain MRI

Outcomes:

- Model with performance on-par with state-of-the-art developed in days.
- Fast exploration of multiple model configurations and architectures.

Tohoku University Hospital

AI Lab

Use Cases

Workflow Automation for Regulatory Screening

Infinity Health

Project:

- Automatically screen regulatory documents and offer advisory.

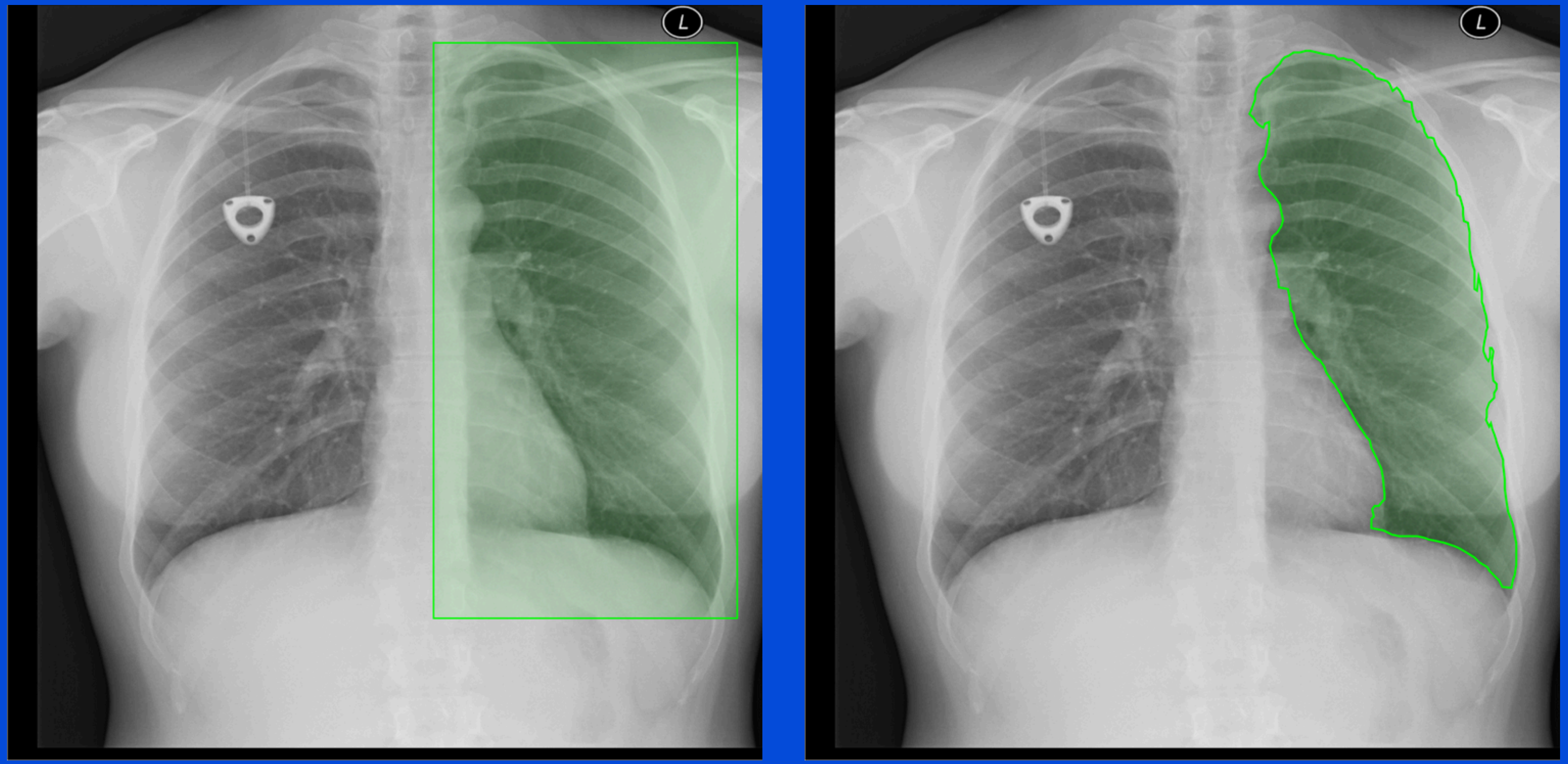
Outcomes:

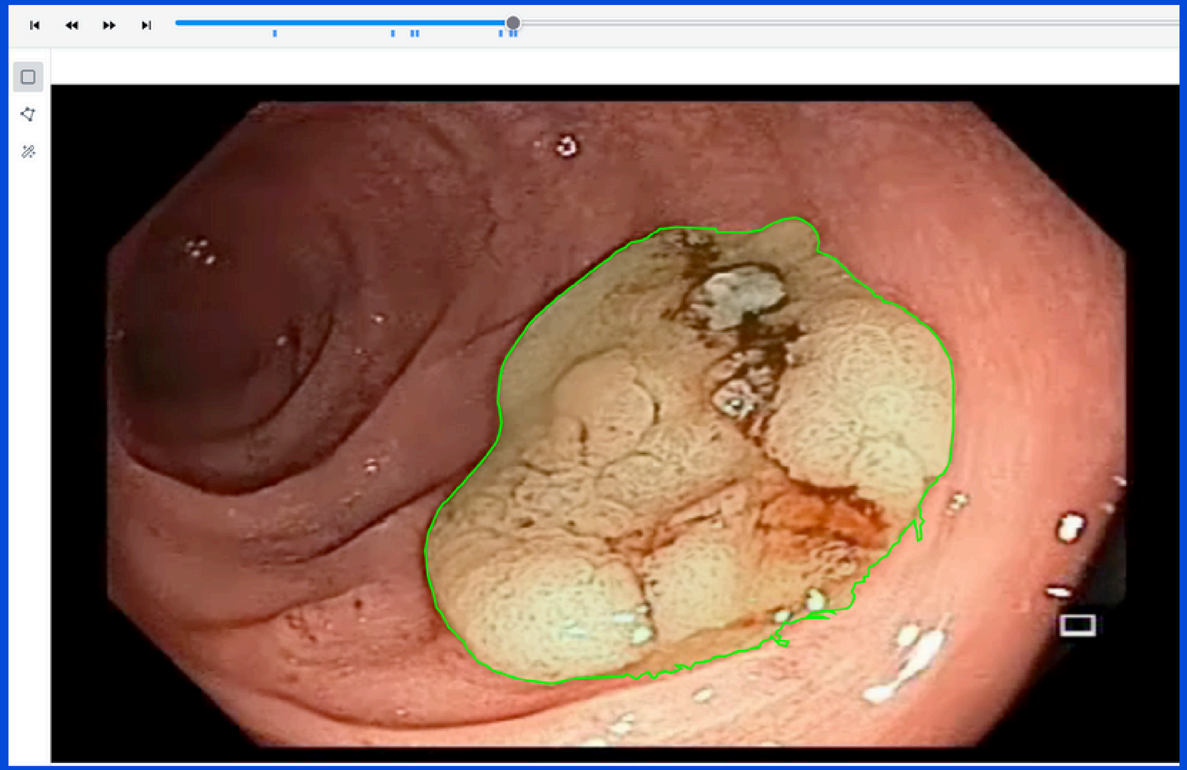
- Months of application backlogs cleared in a day.
- Tailored client advisory for high quality submission.

Unique Features

AI-assisted Annotation

- One-click region selection which significantly boosts annotation efficiency
- Annotate one image or frame and MAEA does the rest automatically



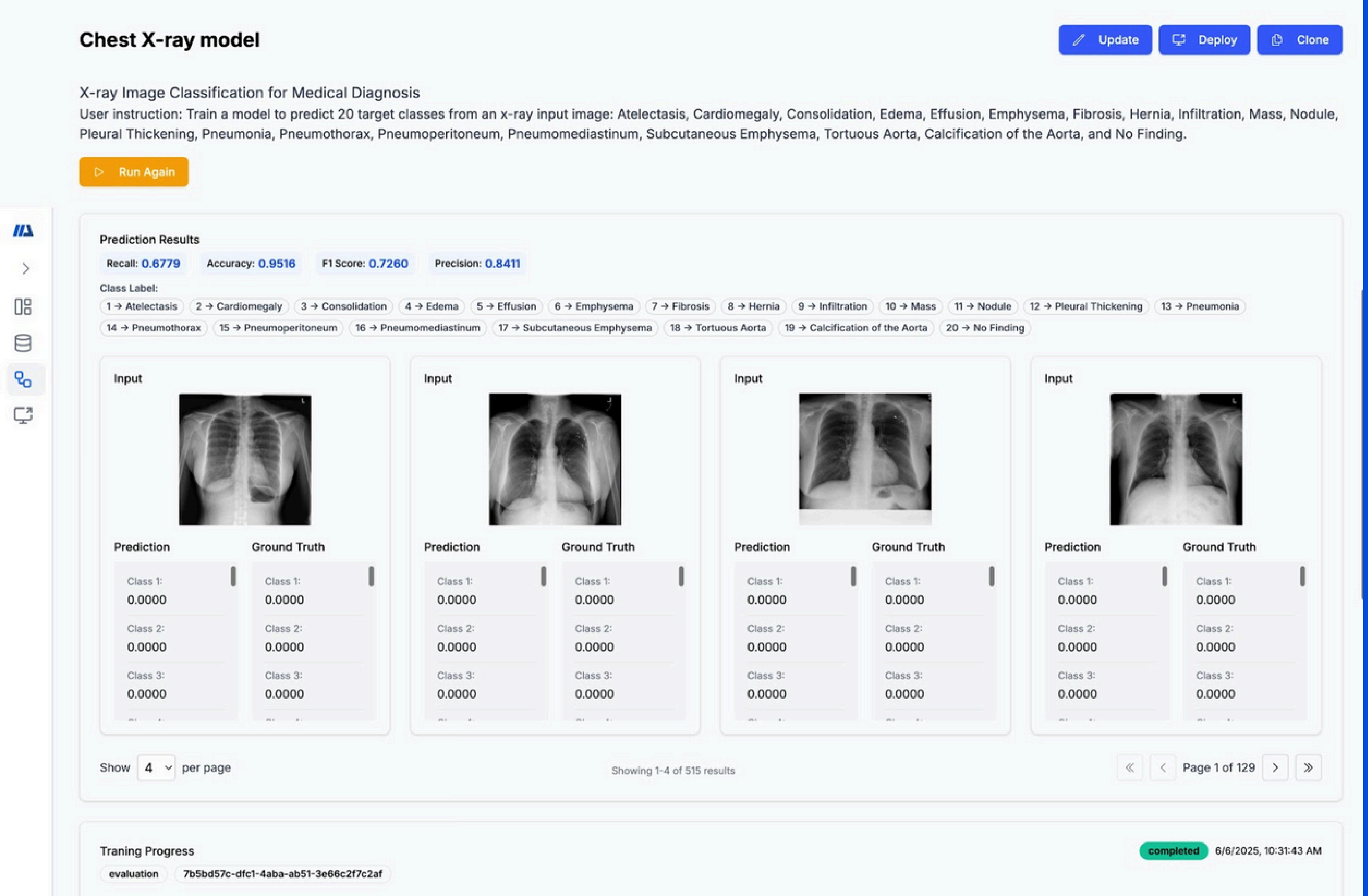


Unique Features

No-code model training with natural languge

ModAstera

- All the model can be trained with natural language.
- This feature allows non-engineers to professionals to build, evaluate and deploy AI models rapidly and efficiently from a single interface.



Chest X-ray model

X-ray Image Classification for Medical Diagnosis

User instruction: Train a model to predict 20 target classes from an x-ray input image: Atelectasis, Cardiomegaly, Consolidation, Edema, Effusion, Emphysema, Fibrosis, Hernia, Infiltration, Mass, Nodule, Pleural Thickening, Pneumonia, Pneumothorax, Pneumoperitoneum, Pneumomediastinum, Subcutaneous Emphysema, Tortuous Aorta, Calcification of the Aorta, and No Finding.

Prediction Results

Recall: 0.6779 Accuracy: 0.9516 F1 Score: 0.7260 Precision: 0.8411

Class Label:

1 → Atelectasis
2 → Cardiomegaly
3 → Consolidation
4 → Edema
5 → Effusion
6 → Emphysema
7 → Fibrosis
8 → Hernia
9 → Infiltration
10 → Mass
11 → Nodule
12 → Pleural Thickening
13 → Pneumonia
14 → Pneumothorax
15 → Pneumoperitoneum
16 → Pneumomediastinum
17 → Subcutaneous Emphysema
18 → Tortuous Aorta
19 → Calcification of the Aorta
20 → No Finding

Input		Input		Input		Input	
Prediction	Ground Truth	Prediction	Ground Truth	Prediction	Ground Truth	Prediction	Ground Truth
Class 1: 0.0000	Class 1: 0.0000	Class 1: 0.0000	Class 1: 0.0000	Class 1: 0.0000	Class 1: 0.0000	Class 1: 0.0000	Class 1: 0.0000
Class 2: 0.0000	Class 2: 0.0000	Class 2: 0.0000	Class 2: 0.0000	Class 2: 0.0000	Class 2: 0.0000	Class 2: 0.0000	Class 2: 0.0000
Class 3: 0.0000	Class 3: 0.0000	Class 3: 0.0000	Class 3: 0.0000	Class 3: 0.0000	Class 3: 0.0000	Class 3: 0.0000	Class 3: 0.0000

Show 4 per page

Showing 1-4 of 515 results

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Traning Progress

evaluation 7b5bd57c-dfc1-4aba-ab51-3e66c2f7c2af

completed 6/6/2025, 10:31:43 AM

Core Team

Joshua Owoyemi

CEO

- PhD in Information Science, Tohoku University.
- 4+ years AI Research Engineer experience at Biotech AI startup.
- Creator of SmilesFormer: Language model for Molecule design and Optimization.
- Has built generative models for enterprise applications in drug discovery.

Tetsuro Mori

COO

- MBA | BSc in Computer Science.
- Promotion and marketing expert.
- Ex-CTO - Computer Vision Startup.
- Ex-PM at Rakuten USA.
- Ex-Zozosuit engineer at Zozo.

Mission

To empower health and medical technology innovators by providing an accessible, integrated AI platform that reduces development costs, simplifies workflows, and ensures compliance with healthcare regulations, enabling them to deliver transformative solutions and make the world a healthier place.

Vision

Be the platform and infrastructure that powers the world’s medical AI.

ModAstera

Contact

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www.modastera.com

[Book a free consultation]