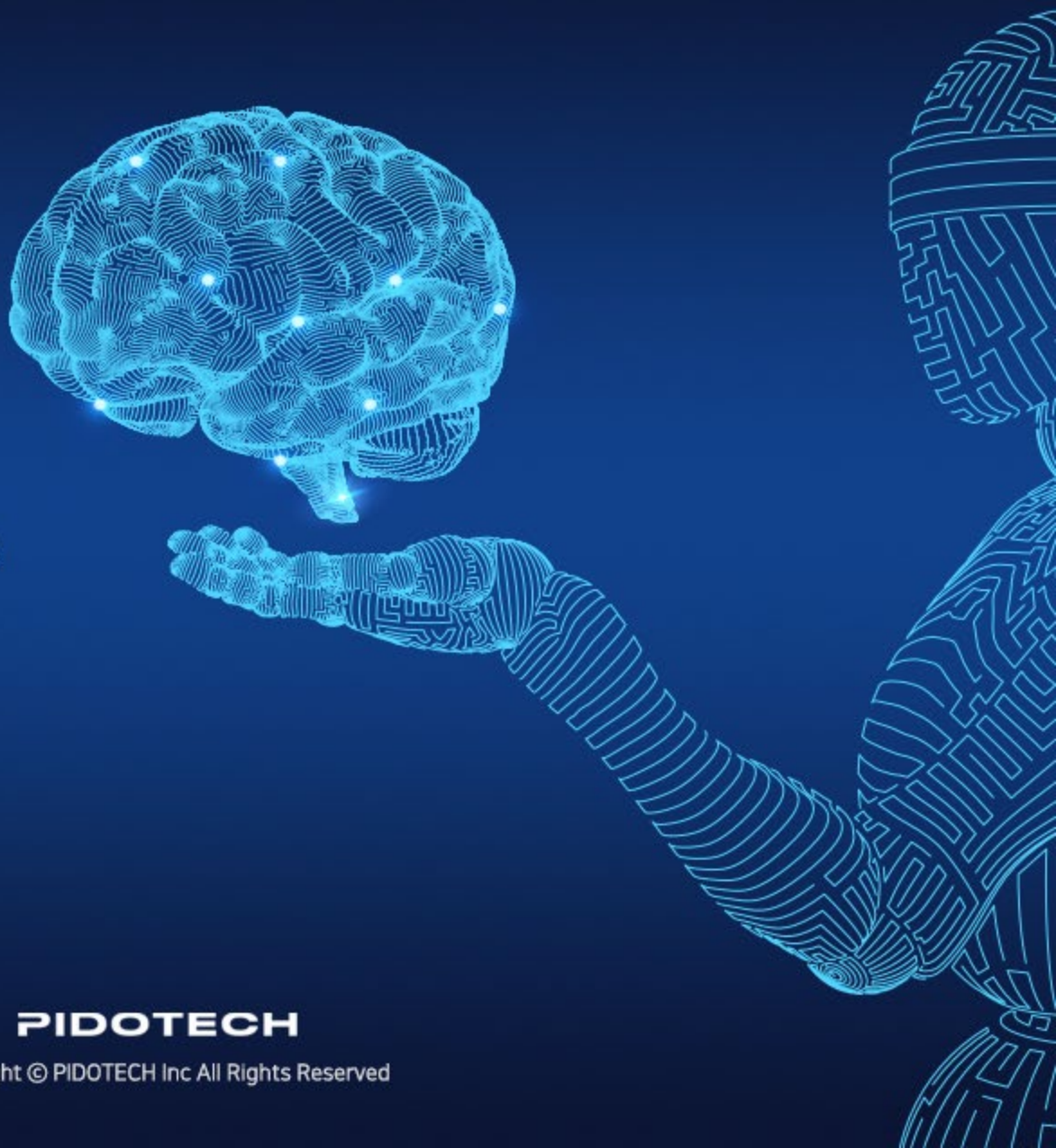
BruceSIM

AI service for Simulation prediction



PIDOTECH

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BruceSIM

We develop an optimal AI Engine that can predict CAE analysis results based on our CAE analysis data by users.

We can provide a customized application for users to make it esaier to use the developed AI Engine.

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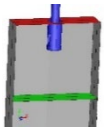
Development process / operation procedure

▶ Development Process

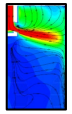
CAE Engineers



Developing CAE models with a large number of input variables

CAE Model

Optimization Engineer

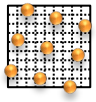


CAE

Thermal Fluid Analysis

Input

Output

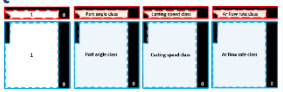


Design of Experiments

Efficient/structured input variable combinations

In/Output data

Machine Learning Engineer



Preprocessing in/output data for imaging

Preprocessed In/Output Data

Machine Learning Engineer

BruceSIM

Develop and train deep learning algorithms to predict CAE results

Input Variables

Mold geometry, process conditions, etc.

Software Engineer

S/W UI Development

▶ Operating Procedures

Field Engineers

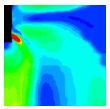
Input arbitrary input variable value

BruceSIM (AI service for simulation prediction)

BruceSIM

Deep learning models for simulation prediction

Predict results



Post-processing image visualization

Predicted results

Field Engineers

Predict CAE results quickly and easily with simple inputs

Features

Preprocessing CAE Analysis Data

- Perform preprocessing to effectively extract the CAE outcomes you want to predict from raw CAE analysis data and apply them to deep learning
- Only need to provide BruceSIM with the CAE results you want to predict

Accumulate CAE analysis data with PIAnO

- Where CAE analysis data is absent or scarce, PIAnO's CAE analysis automation can be used to effectively accumulate CAE analysis data
- Get a lot of CAE analysis data in a single PIAnO run without requiring designers to perform CAE analysis manually

Quickly predict CAE results

- Predict CAE results faster than traditional CAE analysis

Apply the optimal deep learning method

- Perform deep learning by identifying features of CAE results and applying the optimal deep learning method to maximize the accuracy of predicting the results.

Provide simulation prediction tools that are easy to put into practice

Easy to implement in practical situations.

Launch the tool, enter the design you want to predict, and get instant predictions

Expected effect

Application case - Injection molding analysis results and fill time prediction

Design goals

- Prediction of analysis results using deep learning based on accumulated injection molding input and analysis result data

Input Variables

- 2D Mold Geometry
- Number and location of gates

What BruceSIM predicts

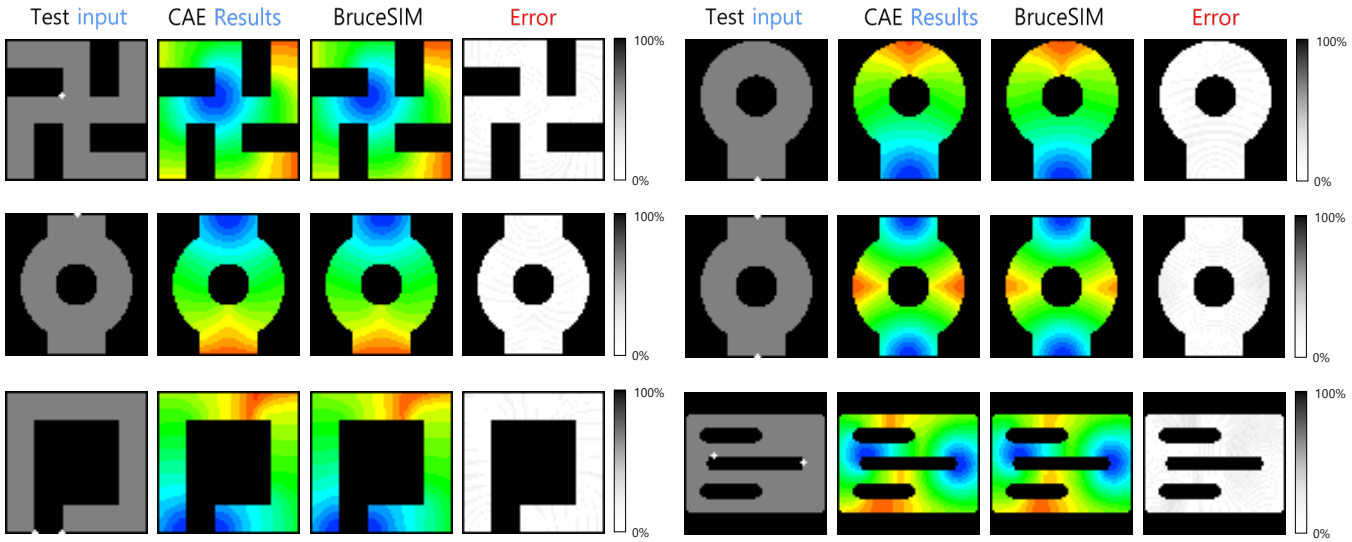
- Fill time

Deep Learning Method

- CNN(Convolutional Neural Networks)

- Number of learned injection molding analysis inputs/results Data : 80,456
- Time required to learn BruceSIM: 1 day

: Molds :Gate



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We will reward you with the best quality and service. thank you

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