News Release

Konica Minolta Wins Gold in the World's Largest AI Competition Hosted by Kaggle

Three Engineers – One Data Scientist and Two AI Engineers – Win 10th Place

Tokyo (July 13, 2022) – Konica Minolta, Inc. (Konica Minolta) announced that its three engineers – one data scientist and two AI engineers – won 10th place in the Image Matching Challenge 2022, hosted by the world's largest AI competition platform, Kaggle, and received the gold medal together with other winners.

In the Kaggle competition, many world-leading data scientists and machine learning engineers vie to prove their skills. Konica Minolta is pleased to note that being among the winners of this prestigious competition has raised international awareness of the company's design and technical prowess in data science and AI engineering.

Gold Medal Winners
Konica Minolta, Inc.
Tomoya Okazaki, Makoto Ikeda:
      AI Technology Development Division, FORXAI Development Center, Technology
      Development Headquarters
Hiroyuki Ujike:
      DX Promotion & Development Center, R&D Headquarters Business Technologies

Outline and Results of the Competition
In the Image Matching Challenge 2022, participants had to develop an AI algorithm to accurately and quickly estimate the correspondence between two images taken from different angles. The winners were determined by how precisely the algorithm could match about 10,000 points in one of the images with the corresponding points in the other within the designated time.

The Konica Minolta team, consisting of one data scientist and two AI engineers, and one other member, earned a high score by: streamlining the steps to extract important areas of the images; pipelining the processing to increase processing speed; and using a validation strategy. In pipelining the processing in particular, the Konica Minolta team realized that processing on the CPU, as well as on the GPU, could take too much time to do the required task, so they

changed the setting to enable images to be processed on the GPU and CPU in parallel. This allowed the team to implement many machine learning models within the designated time, which greatly boosted their score.

Konica Minolta's ICT Specialists and FORXAI

Konica Minolta has been striving to foster and train specialists in imaging IoT and AI technologies, aiming to increase the number of its ICT specialists to around 1,000 to accelerate its digital transformation (DX) efforts under its DX 2022 Medium-term Business Plan. To help engineers improve their skills, Konica Minolta permitted the participants in Image Matching Challenge 2022 to use the company's hardware assets for the competition.

The technical prowess of these ICT specialists is at the core of Konica Minolta's FORXAI imaging IoT platform.
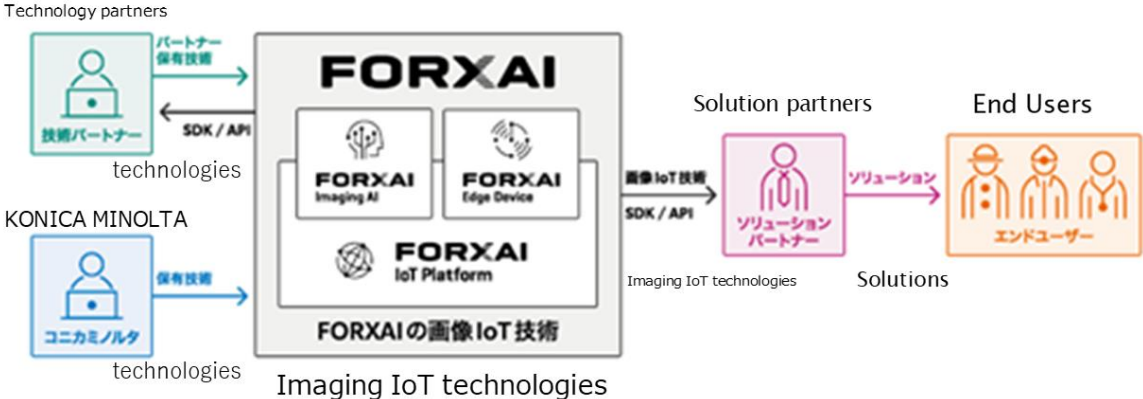
FORXAI is a co-creation-based integration imaging IoT platform, developed to accelerate the shift to DX by visualizing and solving issues faced by offices and other work sites. The platform comprises various IoT and AI technologies possessed by Konica Minolta and its partner companies.

The Konica Minolta team members participating in Image Matching Challenge 2022 are constantly conducting R&D on AI technologies as part of FORXAI Imaging AI, a group of high-speed and high-accuracy AI-based image processing technologies, with the aim of rapidly creating high-quality solutions to contribute to the evolution of workplaces around the world and enhance the safety and security of society.

Kaggle

Kaggle is the world's largest predictive modeling platform that hosts competitions in which data scientists around the world compete and apply their skills to build optimal models based on data provided by companies and researchers. Kaggle is also the name of the company that operates the platform, now a subsidiary of Google LLC.

More than 8 million specialists in statistics and mathematics, including renowned data analysts, from 194 countries have registered with Kaggle. Participants in Kaggle competitions vie to build optimal models within the designated time by trying various algorithms and computational techniques. Working in partnership with many research

institutions and companies, Kaggle is also known for its ability to deliver solutions to various issues, recently through its contributions to research on HIV, the Higgs boson, and traffic prediction.