

Expansion of Digital Talent Development Programs to Help Drive Corporate Digital Transformation and AI Business

～Expansion of existing Data Scientist Development Program and
Establishment of a New 'Business Architect' Development Program～

Tokio Marine Holdings, Inc. (President and Group CEO, Satoru Komiya), hereinafter referred to as "our company", has announced that it will expand its Data Scientist development program, "Data Science Hill Climb," which has been offered externally since 2020, and will also develop a new "Business Architect" development program to also be provided externally starting from May 2024.

As a new solution business of our group, we will offer these talent development programs to support the development of human resources who are capable of driving corporate digital transformation (DX) and AI business.

1. Background

Tokio Marine Group has accelerated our digital talent development so we can continue to solve increasingly diverse social issues and provide value in pre- and post-incident areas, beyond just simple payment of insurance claims, by utilizing digital tools and data.

In 2019, we launched the Data Science Hill Climb program to develop highly specialized human resources capable of developing AI algorithms^{*1}, under the supervision of Professor Yutaka Matsuo of the University of Tokyo Graduate School of Engineering. Over 100 employees from the Tokio Marine Group have completed this program to date, and some have developed AI algorithms that we are using to this day. In 2020, the program was opened to the public^{*2}, providing an opportunity for students from different industries to deepen their understanding of DX and AI business.

In DX and AI, in addition to specialists such as data scientists, it is also extremely important to develop human resources who can plan and manage these businesses and drive change in their organization. In December 2022, the Ministry of Economy, Trade and Industry and the Information-technology Promotion Agency formulated the Digital Skill Standards^{*3}, defining five types of human resources necessary for promoting DX. Among these, the development of business architects, who can plan and manage DX and AI businesses while leading internal and external stakeholders, is considered particularly important.

In our company too, our business architects have taken the lead in working with technology companies to, among other achievements, realize the first structure in Japan's real estate and insurance industries that integrates property insurance enrollment process into the online

purchase of real estate for investment^{*4}. In addition to this, we have also received feedback from past Data Science Hill Climb participants saying that there is a need to develop not only specialists, but also people who can lead and drive DX and AI business, and because of this we have decided to develop educational content for training business architects and also to offer it externally.

^{*1} February 15, 2019 news release: Launch of internal specialized training program for utilizing AI & machine learning ~ 'Data Science Hill Climb' supervised by project associate professor Yutaka Matsuo at the University of Tokyo ~

(https://www.tokiomarinehd.com/en/release_topics/release/h10q7e000000paen-att/190215_e.pdf)

^{*2} May 18, 2020 news release: Enhancing and opening our specialized training program for utilizing AI & machine learning to external users ~ Opening the Data Science Hill Climb to external users ~

(https://www.tokiomarinehd.com/release_topics/release/l6guv30000008k8p-att/200518_j.pdf (Japanese only))

^{*3} Overview of Digital Skill Standards Ver. 1.0 (https://www.meti.go.jp/policy/it_policy/jinzai/skill_standard/20221221002-1.pdf (Japanese only))

^{*4} May 8, 2023 news release: GA technologies, Tokio Marine Nichido and Finatext Launch Embedded Property Insurance on Real Estate Marketplace "RENOSY" (https://www.tokiomarine-nichido.co.jp/company/release/pdf/230508_01.pdf (Japanese only))

2. Program Overview

(1) Content for Training Data Scientists: Data Science Hill Climb

Program content will be expanded to include a new course on utilizing LLMs^{*5}. In the past, programs 1 through 3 had to be taken as a set, functioning as a long-term training program totaling over 250 hours, but participants will now be able to select and take courses according to their needs.

To prevent any delays in participants' acquisition of skills, we will enhance accompanying support by establishing a system allowing participants to consult with instructors on an individual basis.

The programs will be offered sequentially from early May 2024.

^{*5} Large Language Models (LLMs): natural language processing models built with large quantities of data, computation power, and parameters.

Data scientist training program: Data Science Hill Climb

No.	Course title	Duration	Format	Main content
1	Basic Learning	90h	Online lectures, e-learning	AI ethics, machine learning, basic mathematics, applied mathematics, programming
2	Applied Learning	90h	Online lectures, e-learning, group work	Statistical modeling, deep learning (+Pytorch), LLM utilization, AI planning
3	Practice	77h	Online lectures, e-learning, group work	Exercises, presentation

(2) Content for Training Business Architects: Human Resource Development Program for DX & AI Business Planning

These programs cover a wide range of topics from the fundamentals of promoting DX and AI business to generative AI prompts. Consultation with lawyers and patent attorneys will also be available in an AI IP course. Each course is expected to last approximately two to three months and is scheduled to begin quarterly starting in July 2024.

Business Architect Training Program: Human Resource Development Program for DX & AI Business Planning

No.	Course title	Duration	Format	Main content
1	DX Business	17.5h	Online lectures, e-learning	DX basics, ideathon, planning
2	AI Business	18.5h	Online lectures, e-learning	Interactive generative AI, AI generalist basics, AI project planning
3	AI IP	15.5h	Online lectures, e-learning	AI IP contracts and AI patents

Both programs have been developed by our in-house data scientists who are in charge of practical operations, combining the most appropriate training content based on their actual business planning experience and the needs of past participants. Participants can come from any industry or the size of company to both receive lectures and address practical issues together to create specific output in an environment where they can discuss and debate freely.

3. Future Development

While it is important for companies to secure human resources who can utilize data and digital technology to secure a competitive advantage amid the changing industrial structure, many companies are said to be lacking in such human resources.

In the future, we intend to expand our business beyond the training content we are currently providing to include support for specific implementation through data analysis and the use of digital technology, thereby further facilitating the use of digital technology in society.