

AI coding with IBM Watson - Advance -



Develop AI apps!

Let's develop smart programs with AI!

Artificial Intelligence (AI) changes our society as Internet did. Your child will learn the process of AI/Machine Learning application development with IBM Watson for the backend AI and Scratch for the frontend coding language. After this one-week camp, your child will understand the following;

- ✓ **The process** of AI/Machine Learning application development that requires data gathering, AI training, use the trained AI from the program
- ✓ **Information** that AI can handle
- ✓ **Integration** of backend AI, IBM Watson, and frontend Scratch application
- ✓ **Overview of Deep Learning**
- ✓ **Potential and limitation of AI**

Your child will develop applications that recognize or classify texts, images, numbers, and sounds in this camp, and learn about the overview of Convolutional Neural Network know as deep learning.

After this program

Your child will be able to develop AI applications with Scratch and IBM Watson. Your child also understands the process of AI application development, information that AI can handle, integration of backend AI and frontend application, an overview of AI (Deep learning) and the limitation and potential of AI.

Syllabus

- 1) Week 1
 - Introduction
 - AI application development process overview
 - AI program, Smart Classroom program (text command recognition) development process
- 2) Week 2
 - AI program, Make me happy (text-based sentiment analysis) program development
 - AI program, Chameleon (image color classification) program development
- 3) Week 3
 - AI program, Mailman Max (hand-written character classification) program development
 - AI program, Car and cup (image classification) program development
- 4) Week 4
 - AI program, Face Lock (face recognition) program development
 - AI program, Journey to school (number, classification) program development
- 5) Week 5
 - AI program, Alien Language (sound recognition) program development
 - AI program, Pac-Man(number recognition) program development
- 6) Week 6
 - AI program, Chatbot (text recognition) program development
 - AI program, Virtual Pet (image recognition) program development
- 7) Week 7
 - AI program, Secret Code (sound recognition) program development
 - AI program, Judge a book (image recognition) program development
- 8) Week 8
 - Many types of AI, Convolutional neural network (deep learning)
 - Learning process of neural network, gradient descent
- 9) Week 9
 - MNIST hand written number recognition
 - Classification and regression
- 10) Week 10
 - Long-term short memory network and Generative Adversarial Network
 - Discussion limitation and social impact of AI