Jangyoung Jeong

OBJECTIVE

We are learning new technology domains and conducting research to develop practical applications that combine them with Deep Learning, a core model of AI technology.

STRENGTH

Self-motivated
Flexibility
Solving complex problems
Results driven

E-MAIL

Akillness38@gmail.com

WEBSITE

https://akillness.github.io
https://github.com/akillness

SKILLS

PROGRAMMING LANGUAGE

Python, C/C++, C#, Objective-C, Dart, JS, SQL

OPENSOURCE

Pytorch, Tensorflow, Numpy, Pandas, Skitlearn, OpenCV, DirectSDK, WinAPI, Linux, Bootstrap, JQuery, PyQt

TOOLS

Visual Studio, VS Code, Android Studio, VIM, XCODE, Editplus, Matlab, GCP, AWS, Blender, Unity3D, Unreal4, Github

EDUCATION

SEP 2024 - PRESENT

Ph.D Student in Game Engineer | Hongik University

AUG 2014 - AUG 2016

Master of science in game | Hongik University

MAR 2007 - FEB 2014

Bachelor of science in game software | Hongik University

EXPERIENCE

PH.D STUDENT

Jul 2024 – Present

FEB 2025 – PRESENT

LLM-based RAG & Agentic AI construction project

- Implementation of Resume Analysis System using LlamaIndex Framework
- Development of Agentic AI System for Coding & Web Search based on OpenAI API GPT-4o mini

SEP 2024 – JAN 2025

SLM-based on-device chatbot system construction project

- Performance Evaluation of SLM Models (TinyLlama, Deepseek R1 Distill) using LangGraph/LangChain with Zero/Few-shot Prompts and Chain-of-Thought Techniques
- Architecture Separation & Server System Construction for GPT Chatbot Web Service Implementation
- Multi-Process Python Code Implementation for Socket/WebSocket Server
- Dart Code Implementation for Web Client using Flutter Framework
- PEFT Code Implementation for Pre-training System Optimization
- Post-training System Exploration & Reinforcement Learning Implementation (IMPALA, A2C, A3C, ACER) for Cartpole Environment Project with Documentation

AUG 2024 – SEP 2024

Image-Based Game Quality Assurance Automation Process

- Application of a multi-thread pool(GIL) for performance improvement
- Utilization of Pywinauto for process handling
- Multi-Scale Template Matching to recognize images
- Extraction of GUI context using Keras-ocr
- Fine-tune DETR(Detection Transformer) for Playing Analysis

JUL 2024 – AUG 2024

A lightweight, runtime-optimized SLM chatbot for detective game

- PEFT LORA learning based on polyglot 1.3B
- Structure design to reduce model loading and inference time
- Exploring ways to improve accuracy

NC SOFT

Mar 2018 – Jun 2024

(~ 6 years 3 months)

JUN 2022 – DEC 2023

Digital double facial 4D scan and 4D HMC mesh low-poly process construction

▪ Faceform (formerly R3DS) system pipeline for 4D Scan Mesh Low-poly updated to the latest version
▪ Establishment of Faceform system pipeline for 4D HMC (Head Mount Camera) Mesh Low-poly

MAR 2022 – JUN 2022

Programming a robotic arm for automatic camera calibration

▪ Camera Calibration Checkerboard RobotArm Shooting Purpose
▪ Dynamixel Openmanipulator-x Serial Communication Implementation with 5 Actuators (Python, C#)

OCT 2021 – MAR 2022

Digital Twin Face 4D Scan Mesh Low-poly Process Building and Post-processing

▪ Building a pipeline system for R3DS (Russian 3D Scan) 4D scan mesh low-poly processing solution
▪ Building a pipeline for 4D scan mesh low-poly large-scale processing system and outputting post-processing results
▪ Optimizing Python code for UV-based topology registration/reordering

MAR 2021 – OCT 2021

Development of CA (Cellular Automata)-based Match-3 Puzzle Game Level Generator Web Service

▪ Active User Testing of MATCH-3 Level Generator Purpose
▪ Provides the ability to download the results of trained GAN models using Python Flask as individual and *.zip files by tuning parameters in the web client.

OCT 2019 – MAR 2021

Development of a Match-3 puzzle game Level Generator based on CA (Cellular Automata)

▪ To utilize Match-3 Level Generator for planning using procedural content generation method
▪ Implementation of CA (Cellular Automata) function and development of Level Generator based on CA model

▪ Proposal of CA Generative Combination to improve performance with more diverse patterns

▪ Utilization of learning data of GAN (Generative Adversarial Networks) model

MAR 2018 – SEP 2019

Development of a Match-3 Puzzle Game Difficulty Estimation Agent Based on MCTS (Monte Carlo Tree Search)

▪ Development of an agent to evaluate the difficulty of a Match-3 puzzle game based on simulation

▪ Implementation of MCTS (Monte Carlo Tree Search) function and application to game agent logic

▪ Derivation of meaningful results from acceleration and level difficulty evaluation

COM2US

Oct 2016 – Feb 2018

(~ 1 years 6 months)

JUL 2017 – DEC 2017

Testing the application of in-game reinforcement learning agents in "Dungeon Delivery"

▪ Exploration and research on whether AI technology can be applied to developed games

▪ Design a Tensorflow-based reinforcement learning model and apply it to a game using socket communication

▪ Design Gridmap as a learning environment for the game environment and apply DQN (Deep Q-Network) to the action prediction model

▪ Configure a Client-Server Network and perform learning to perform environment information and actions between Unity3D and Python platforms

APR 2017 – JUL 2017

Development of Issue Tracking, a developer sharing site that provides know-how on development collaboration processes

▪ Development of in-house web service that provides functions such as Stack Overflow, a developer sharing site for providing development collaboration process.

▪ Development using Code Igniter(CI) framework of MVC (Model View Controller) Pattern, WYSIWYG editor Summer note, DB(Mysql), and ajax functions

JAN 2017 – APR 2017

Other in-house website management (front-backend/DB), 2 in-house hackathons, Unity3D game development

NOV 2016 – JAN 2018

Management and support of new/experienced recruiting site, R&D related to mobile development/optimization technology, maintenance of discontinued mobile game services

PATENT

AUG 2019 – DEC 2020

Method and device for determining game difficulty | (Patent number : 10-2195-4710000)

NOV 2017 – DEC 2017

Affective computing device and its operating method | (Patent number: 10-2017-0009076)

ACTIVITIES

DEC 20. 2024

IEEE RAAI 2024 Conference | Poster, "Image-Based Game Quality Assurance Automation Process"

APR 17. 2023

NC Research AVATAR *Presentation video*

APR 28. 2020

NCDP2020 "Development of MATCH-3 Puzzle Game Difficulty Generator" Announcement

JAN 2019 – DEC 2022

***NCFellowship* Operations Management**

DEC 2017

Patent technology transfer related to JTBC entertainment program *"Paper of Perfect"*

MAR 15. 2017

***Article* about the sentiment analysis platform EmotionTracer**

JAN 28. 2016

"Love Sensor" HCI APP MARKET Encouragement Award Winner

JAN 28. 2016

J. Y. Jung, Y. B. Kim, S. H. Lee, S. J. Kang, "Facial Expression Scale Recognition System for Game Play Analysis", HCI Korea, 2016.

DEC 10. 2015

Y. B. Kim, S. J. Kang, S. H. Lee, J. Y. Jung, H. R. Kam, J. Lee, Y. S. Kim, J. S. Lee and C. H. Kim, *"Efficiently Detecting Outlying Behavior in Video-Game Players"*, PeerJ, 2015 (SCI-E).

NOV 12. 2015 – NOV 15. 2015

Emotion Analysis Platform *EmotionTracer G-star Exhibition Interview*