인공지능 기술을 활용한 연구 내용 소개

ACK 2023 신진학자 워크숍

문화지식융합대학
데이터사이언스 전공

2023. 11. 3.

권범

1. About Me

❖ Profile (1/2)

○ Education

2012. 3. ~ 2018. 2.	**Ph. D. degree** School of Electrical & Electronic Engineering, Yonsei University, Seoul, South Korea	YONSEI UNIVERSITY
2008. 3. ~ 2012. 2.	B. S. degree School of Electronic Engineering, Soongsil University, Seoul, South Korea	Soongsil University

○ Research Area

- Artificial Intelligence and Its Applications

- Computer Vision, Wireless Communication, etc.

○ Career

2021. 9. ~ 2023. 8.	**Dongyang Mirae University** *Assistant Professor* @ **Department of Artificial Intelligence**, Seoul, South Korea	동양미래대학교 DONGYANG MIRAE UNIVERSITY
2019. 10. ~ 2021. 8. (1 year 11 months)	**Samsung Electronics Company, Ltd.** *Staff Engineer* @ Network Business, Suwon, South Korea	SAMSUNG
2018. 3. ~ 2019. 9. (1 year 7 months)	**Agency for Defense Development (ADD)** *Senior Engineer* @ The 1st Research and Development Center, Daejeon, South Korea	국방과학연구소 Agency for Defense Development

1. About Me

❖ Profile (2/2)

○ Research Projects – *Principal Investigator*

Title: **Survey of Technology for Extracting Terrain Features from Satellite Images**

Research Period: 2023. 9. 11. ~ 2023. 12. 8.

Funding Agency: Agency for Defense Development (ADD)

Title: **Multimodal Emotion Recognition and Expression Technologies for Realistic Interaction in Metaverse**

Research Period: 2022. 9. 1. ~ 2025. 2. 28.

Funding Agency: National Research Foundation of Korea (NRF)

Title: **Method of Implementing Channel Coding for Multi-Receiver Millimeter Wave Data Link**

Research Period: 2022. 8. 1. ~ 2022. 10. 31.

Funding Agency: Agency for Defense Development (ADD)

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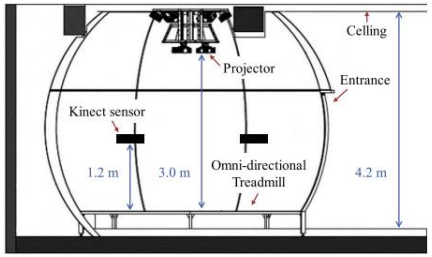
2. Research Overview

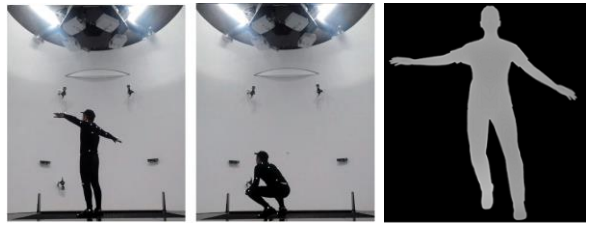
Multimodal AI Convergence Technology

Observation Platforms

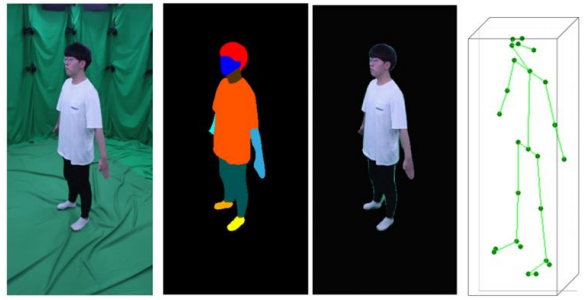
Recording Studio



Multimodal Data Collection



Infrared (IR) Depth

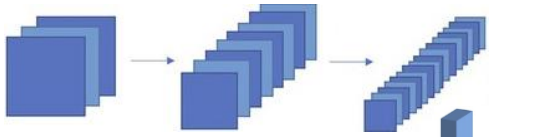


RGB Segmentation Silhouette Skeleton

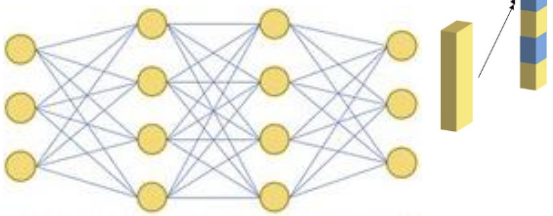
Multimodal Deep Learning

Data Processing & Analysis

Data Synchronization



Multimodal Deep Learning Architectures



Multimodal Data Fusion

Multimodal AI Applications

Multimodal Model

Action Recognition

Abnormal Action Recognition

Emotional Gesture Generation

Emotional Face Generation

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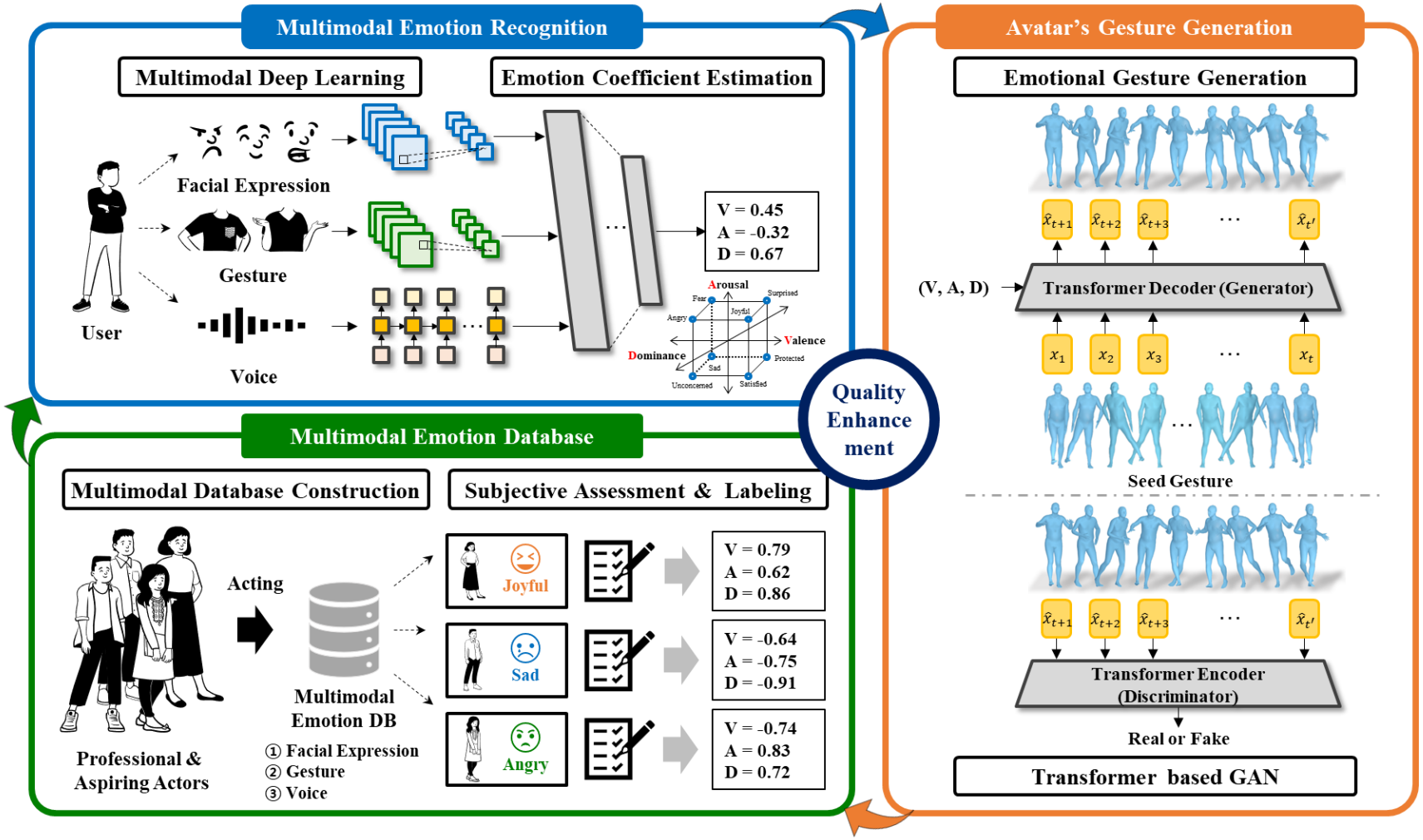
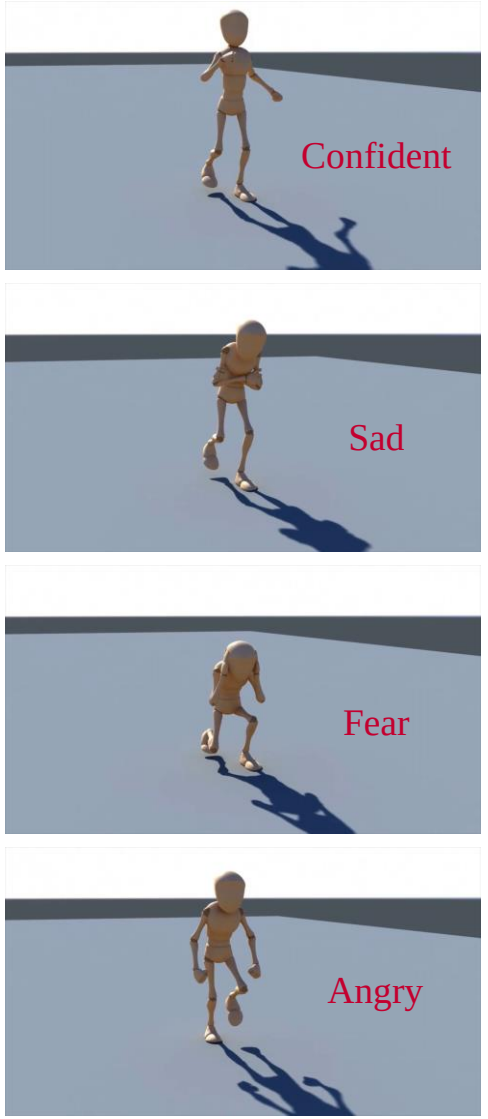
2. Research Overview

Modality: *Video* + *Voice*

✓ Emotion Recognition and Emotional Gesture Generation

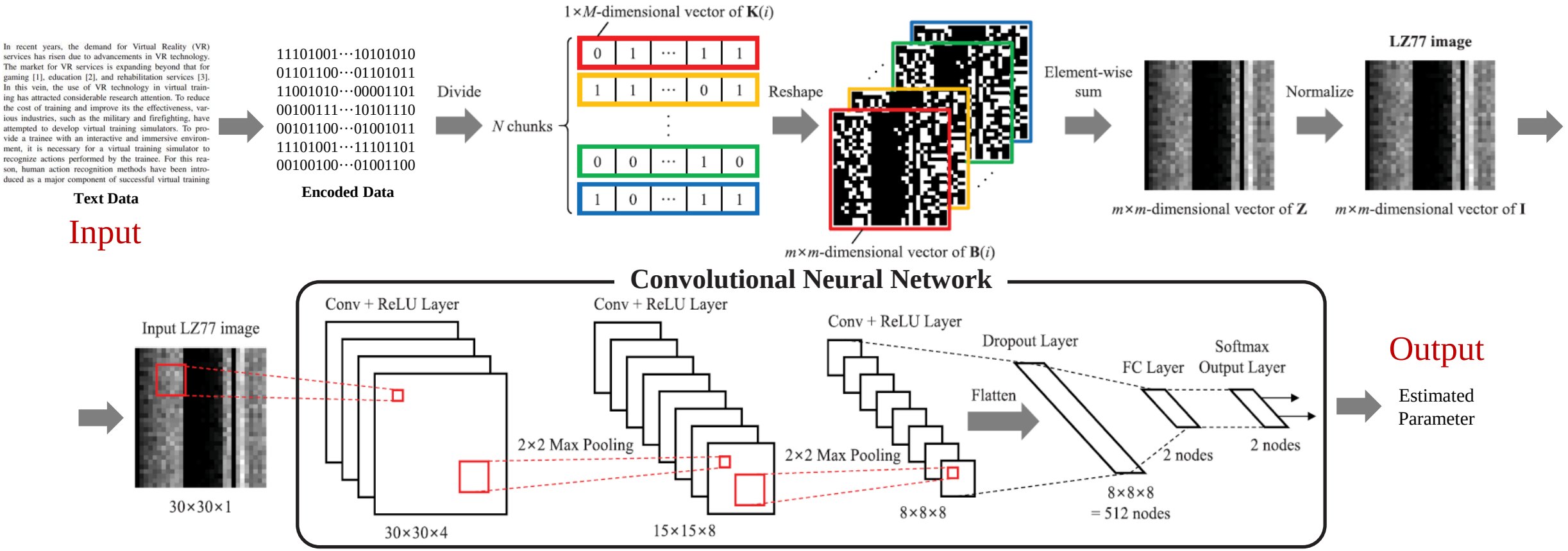




2. Research Overview

Modality: *Text*

- ✓ Development of Method for Estimating the Compression Type of Text Data and Parameter Using Deep Learning



Beom Kwon *et al*., "Accurate Blind Lempel-Ziv-77 Parameter Estimation via 1-D to 2-D Data Conversion Over Convolutional Neural Network," **IEEE Access**, vol. 8, pp. 43965-43979, 2020.

THANK YOU!
Q & A

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