Ruturaj Mahadshetti

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PROFESSIONAL GOALS

To advance the frontier of AI and machine learning research by developing innovative algorithms and techniques that enhance the understanding, efficiency, and applicability of intelligent systems across diverse domains, ultimately contributing to solving complex real-world problems and improving the quality of human life.

EDUCATION

Chonnam National University — Gwangju, South Korea
Master of Science. GPA: 4.13/4.5 — Sept 2021 - Aug 2023
Artificial intelligence

Shivaji University — Kolhapur, India
Bachelor of Engineering. Percentage: 63.28 % — Aug 2016 - March 2020
Computer science

PROFESSIONAL EXPERIENCE

Graduate School of Data Science [Chonnam National University] — Gwangju, South Korea.
AI Researcher — Aug 2023 – current

- Focus on multi-modal large language models.
- Focus on integrating visual data with other modalities.
- Develop computer vision projects.

Multimedia Image Processing Lab [Chonnam National University] — Gwangju, South Korea.
Research Assistant — Sep 2021 - July 2023

- Develop computer vision projects.
- Develop recommendation system.
- Develop a web application.

PUBLICATION

Journal

- Mahadshetti Ruturaj, Cho-Rong Yu, Jinsul Kim, and Tai-won Um, "**Enhanced Traffic Sign Detection Network Using YOLOv9 with Integrated Multiscale Feature Fusion and Context-Aware Aggregation (MSCA-YOLO)**", IET Image Processing, 2024. [Under Review]
- Mahadshetti Ruturaj, Jinsul Kim, and Tai-won Um, "**Sign-YOLO: Traffic Sign Detection Using Attention-based YOLOv7**", IEEE Access (2024). Source
- Mahadshetti Ruturaj, Guee-Sang Lee, and Deok-Jai Choi. "**RMFPN: End-to-End Scene Text Recognition Using Multi-Feature Pyramid Network**", IEEE Access (2023). Source

Conferance

- R. Mahadshetti, G.-S. Lee and D.-J. Choi, "**Feature Decomposition Network-based method Scene Text recognition**", Korea Smart Media Society 2023 General Conference, 2023.
- R. Mahadshetti, G.-S. Lee, S.-H. Kim, and H.-J. Yang, "**LHFAN: Scene Text Recognition Method Based on Multi-level Feature Fusion and Enhancement of Semantic Knowledge**", The 29th International Workshop on Frontiers of Computer Vision, 2023. Source
- R. Mahadshetti, G.-S. Lee, S.-H. Kim, and H.-J. Yang, "**RFPN: End-to-end and Efficient Scene Text Recognition using Feature Pyramid Network**", The 10 International Conference on Big Data Applications and Services, 2022.

PROJECT EXPERIENCE

Computer Vision

- Multi-modal LLM [Supervisor: Prof. Tai-Won Um] Dec 2024 – Current
  - Focus on multi-modality in large language models.
  - Focus on integrating visual data with other modalities.
- Traffic Sign Detection [Supervisor: Prof. Tai-Won Um] Aug 2023 – Dec 2024
  - Detect and Recognize traffic signs from images.
  - Focus on reducing the memory size of the model.
- Scene Text Recognition [Supervisor: Prof. Guee-Sang Lee] Sept 2021 – July 2023
  - Recognize text content from natural images.
  - Focus on extracting and utilizing low-level features.
- Personal Information Detection and Deletion System [Prof. Hyung-Jeong Yang.] Sept 2022 – Dec 2022
  - Face detection/recognition and detecting personal information leakage.
  - Web crawling and web application development.
  - Focus on extracting and utilizing low-level features.

Recommendation

- Movie Recommendation System [Supervisor: Prof. Guee-Sang Lee.] March 2022 – June 2022
  - Develop a web application.
  - Recommend a movie based on emotion.

VOLUNTEER WORK

Teaching Assistant: Multimedia Image Processing Lab [CNU].

SKILLS & INTRESTS

Programming Language: Python, R
ML Models RESNET, VGG, CNN, YOLO, Transformer, Llama, ImagebindLLM
Framework: TensorFlow, Keras, Pytorch, Scikit-Learn.
Analysis Library: Pandas, Numpy, Matplotlib, Plotly.
Language: English, Marathi, and Hindi.
Interests: Artificial Intelligence, Machine learning, Data science, Computer vision, Image processing.

STRENGTHS

Hard-working, Eye for detail, Creative, Resourceful, Confidence

HONORS AND AWARDS

Scholarship in Chonnam National University 2021-2023

REFERENCE

- Prof. Tai-Won Um, Graduate School of Data Science, Chonnam National University, Gwangju City, South Korea.
- Prof. Deok-Jai Choi, Department of Artificial Intelligence Convergence, Chonnam National University, Gwangju City, South Korea.
- Prof. Guee-Sang Lee, Department of Artificial Intelligence Convergence, Chonnam National University, Gwangju City, South Korea.