NASRULLAH KHAN

Research Assistant (AI [ML/DL])

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📍 Seoul,South-Korea
🌐 Still in Progress   R^G ResearchGate   🐦 @nasrullah_107   in nasrullah107   ○ Nas-Azzam

PERSONAL PROFILE STATEMENT

I am a research student with a solid background in AI, focusing on machine learning, computer vision, and natural language processing a.k.a (Vision and Language). My goal is to explore and develop AI systems that address diverse challenges and contribute to advancements in the field. Currently, I'm working on building a multi-model LLM. To facilitate reasoning capabilities and understanding via various modalities, explore their potential to utilize and enhance their ability to interpret and reason more intelligently about the real world.

Areas Of Interest

Deep Learning ⬚ Computer Vision ⬚ Vision and Language ⬚ Multi-Model ⬚ VLLMs

EDUCATION

M.S. Architectural Engineering	B.S. Software Engineering
Chung-Ang University, Seoul, South-Korea, Department of Architectural-Engineering	**Islamia College Peshawar, KPK, Pakistan, Department Of Computer-Science**
📅 Sept 2023 – Expected (Aug-2025)	📅 Sept 2018 – July 2022
• CGPA: 4.13/4.5	• CGPA: 3.35/4
• Transcript-Link	• Transcript-Link

EXPERIENCE

Vision Team

📅 Sep 2023 – Present   📍 ContilLab, Seoul, South-Korea

- Working on AuToPTZ tracking for construction workers in the field.
- Contributed to AI model design, dataset curation, model training, and customization for various use cases, supporting lab research and innovation.
- Specialized in object detection, segmentation, object tracking, 360-degree detection, gaussian splatting for reality capture, PTZ camera auto-tracking, and Conversational AI (Large-Scale LLMs/VLMs/Multi-Model training, others).
- Gained expertise in computer vision and conversational AI through academic research and industrial R&D collaborations.

AI Engineer

📅 Sep 2022 – Present (Remote)   📍 Aartec Ltd, UK

- Leading the development of an agent-agnostic pipeline for "HostyAI," a property channel management solution powered by LLMs and intelligent agents for full automation.
- Designed and integrated advanced AI solutions, including recommendation systems, OCR, and chatbots for real-world applications.
- Collaborated with cross-functional teams to deploy scalable, efficient AI-driven solutions for business-critical needs.

Undergraduate Research Assistant

📅 Jan 2021 – Sep 2022   📍 Dip Lab, ICUP Peshawar

- Started actively engaging with the AI community, building a foundation in machine learning and computer vision.

- Gained a strong understanding of computer vision, from image processing to advanced techniques.
- Acquired hands-on experience in training, fine-tuning, and optimizing ML and DL models for diverse applications.

PARTICIPATED PROJECTS

Position: Researcher
Project Title: Development of technology to ensure safety of construction site workers
Funding Agency: Korea Agency for Infrastructure Technology Advancement (under the Ministry of Land, Infrastructure and Transport)

Position: Researcher
Project Title: Development of a metaverse-based construction safety social platform
Funding Agency: National Research Foundation of Korea, (NRF)

PUBLICATIONS AND THESIS

First Author (Published)

Khan, N., Zaidi, S.F.A., Abbas, M.S., Lee, D., Lee, D. (2024). *Tracking multiple construction workers using pose estimation and feature-assisted re-identification model*. Automation in Construction, 168, 105771. [IF:9.6, RANK: Q1]

Khan, N., Zaidi, S.F.A., Sabir, A., Abbas, M.S., Hussain, R., Park, C., Lee, D. (2024). *DTR: A Unified Detection-Tracking-Re-identification Framework for Dynamic Worker Monitoring in Construction Sites*. International Conference on Construction Engineering and Project Management.

Co-Author (Published)

Asmare, M.G., Kumar, V., Singh, S.K., Ravikumar, R.N., **Khan, N.** (2025). *Secure and Intelligent Smart Parking: A Blockchain, Federated Learning, and Digital Twin Approach*. Sustainable Smart Cities and the Future of Urban Development, 395–416.

Hussain, R., Sabir, A., Abbas, M.S., **Nasrullah, K.**, Zaidi, S.F.A. (2024). *Multi-agent Conversational AI System for Personalized Learning of Construction Knowledge*. International Conference on Construction Engineering and Project Management.

Tran, S., **Khan, N.**, E.C.,Kimito C, Pedro, A., Soltani, M., Hussain, R., Yoo, T., Park, C. (2023). *Extracting Information from Construction Safety Requirements Using Large Language Model*. Firenze University Press.

Tran, S., Yang, J., Hussain, R., **Khan, N.**, Kimito, E., Pedro, A., Soltani, M., Lee, U.K. (2024). *Leveraging large language models for enhanced construction safety regulation extraction*. Information Technology in Construction (ITcon).

First Author (In-Progress)

- MP-MCWT: Message Passing Strategy for Multi-Camera Worker Tracking in Construction. Automation In Construction. [Status: Under-Review] [IF:9.6, RANK: Q1]
- Context-Aware and Computationally Efficient YOLOv11 Model for Dynamic Object Detection on Construction Sites. Knowledge-Based Systems. [Status: Submitted]

Thesis

- Supervised Foreground Extraction and Classification Via Segmentation With Deep Transfer Learning of Camera-Trap Images. [Status: Completes] [Bachelor Thesis]

CONFERENCES ATTENDED

- International Conference on Construction Engineering and Project Management, Sapporo, Japan, 2024.
- Korean Society of Construction Management and Engineering , Jeju, Korea, 2024.
- International Conference on Construction Applications of Virtual Reality ,Florence, Italy, 2023.(Virtually)

CERTIFICATES & SKILLS & OTHERS

Machine Learning For ALL (Course

University of London, Coursea
Certificate Link

Machine Learning / Deep Learning (Course)

Chung-Ang University
Certificate Link

Peer Review Certificate

Focus on Peer Reviewing Process
Certificate Link

IELTS

Overall Bands : 6.5
Certificate Link

CAYSS Scholar

Chung-Ang University Asian Young
Scientist Scholarship (2023)
Certificate Link

AI TOOL-KITS

PyTorch TensorFlow Keras Sklearn OpenCv Langchain
Ultralytics LLaVa

PROGRAMMING LANGUAGES

Python LaTeX JavaScript C++

SPOKEN LANGUAGES

English Urdu Pushto

PEER-REVIEWER

Engineering Applications of Artificial Intelligence (EAAI)

WRITING SKILLS

Technical Research Writing Overleaf/Latex Microsoft Office Draw.io

SERVICES

Azure OpenAI Services Azure Machine Learning Services Google Colab Service
Dockers Github