DEEPAK GHIMIRE, Ph.D.

Computer Vision & AI/ML · Edge AI · 2D/3D Perception & Robotics · Model Optimization

ghmdeepak@gmail.com | 010-6599-1928 | Jeonju, South Korea
ghimiredeepak.com.np | ghimire-deepak | ghimiredhikura | 0000-0001-8940-8739



Experience: 15+ Years (10+ after PhD)

Senior Research Engineer

Korea Electronics Technology Institute (KETI)

Jul 2024 – Present | Jeonju, Korea

- **Fire/Smoke Detection**: Develop RGB/thermal perception and temporal alarm verification for firefighting vehicles.
- **Physical AI / Delta Robot**: Build oriented detection and tracking for pick-and-place; explore visual-prompt product onboarding.
- **Autonomous Tractors**: Develop GPS/IMU/camera-based guidance and straight-line error analysis for paddy fields.

Research Professor

Soongsil University

Jan 2022 – Jun 2024 | Seoul, Korea

- Developed one-shot structured pruning and dataset compression for efficient edge AI.
- Taught Computer Vision & Deep Learning; supervised graduate students in AI/ML research.
- Contributed to research planning and funding proposals.

AI / Computer Vision Engineer (Freelance)

BeEmotion.ai (formerly NVISO.ai)

Feb 2018 – Apr 2022 | Remote via Upwork Inc.

- Benchmarked **9 ARM inference engines** on Raspberry Pi/Jetson Nano; evaluated latency, accuracy, RAM, and TVM tuning.
- Contributed to an in-car Interior Monitoring System (IMS) for driver state and occupant behavior.

Postdoctoral Researcher

Korea Electronics Technology Institute (KETI)

Jul 2014 – Feb 2020 | Seoul, Korea

- Developed vision-based ADAS algorithms (driver state monitoring, forward collision warning, lane departure warning) for dashcams & mobile.
- Developed algorithms for pedestrian/vehicle detection, bird's-eye-view 3D perception and stereo depth estimation.

Earlier Roles

Jeonbuk National Univ., Simon Fraser Univ., Lumbini Eng. College

2007 – 2014 | Korea, Canada, Nepal

- Graduate Research Assistant at **Jeonbuk National University, Korea** (Mar 2009 – Aug 2014): face detection, facial expression analysis, driver monitoring, traffic surveillance, and object tracking.
- Visiting PhD Scholar at **Simon Fraser University (SFU), Canada** (Feb 2014 – Apr 2014): geometric feature extraction and facial expression analysis at the Vision and Media Lab.
- Teaching Faculty at **Lumbini Engineering College, Nepal** (Aug 2007 – Nov 2008): C++, Computer Graphics, Digital Signal Processing, and Image Processing with hands-on lab instruction.

Education

Ph.D. in Computer Science & Engineering [CGPA: 97.2/100]

Jeonbuk National University

Mar 2011 – Aug 2014 | Jeonju, Korea

- **Thesis:** Recognition of Facial Expressions Based on Salient Texture and Geometric Features.

M.Sc. in Computer Science & Engineering [CGPA: 96.5/100]

Jeonbuk National University

Mar 2009 – Feb 2011 | Jeonju, Korea

- **Thesis:** A Robust Face Detection Method Based on Skin Color and Edges.

Technical Skills

- **AI / Vision**: 2D & 3D perception, object detection, ADAS, tracking, model compression, structured pruning.
- **Frameworks**: PyTorch, TensorFlow, TensorRT, OpenVINO, OpenCV, Open3D, MMDetection3D, NCNN, and MNN.
- **Edge**: Jetson Nano/Xavier/Orin, Raspberry Pi, and ARM systems.
- **Programming**: Python, C/C++; experience with MATLAB and Java.
- **Robotics / Tools**: ROS1/ROS2, Qt, Visual Studio, Linux, Git, real-time inference optimization.
- **Foundation Models**: Basic experience with LLMs, VLA models, and world models.
- **Research & Deployment**: Peer-reviewed publications, edge-AI benchmarking, and real-time system integration.

Metrics & Languages

- **Citation Metrics as of 2026.11.02**

Platform	Articles	h-index	Citations
Google Scholar	55	20	2074
ResearchGate	59	19	1833
Semantic Scholar	52	18	1431
Scopus	43	18	1407
Web of Science	37	12	791

- **Languages**

Nepali (Native)
English (C1 - Advanced)
Korean (Fluent)
Hindi (Fluent)

Proficiency levels are self-assessed.