

# SAEED AHMAD

MACHINE LEARNING & COMPUTER VISION ENGINEER

North Chungcheong, South Korea | 010-6672-0250 | saeedahmad.icp@gmail.com | www.saeedahmad.me  
LinkedIn: <https://www.linkedin.com/in/saeedicp/> | GitHub: <https://github.com/saeedahmadicp>

I am a machine learning and computer vision engineer with over three years of experience in the field. As a freelance ML engineer, I have completed over fifty projects and served as an ML Engineer at DiveDeepAI. I completed my master's in Artificial intelligence, along with working as an ML researcher in the Algorithmic Machine Intelligence lab for over two years. I specialized in advanced computer vision for medical applications and transportation automation. My expertise includes machine learning, computer vision, multi-agent and continual learning, natural language processing, and many more. I am looking forward to expanding my professional career in AI and ML.

## EXPERIENCE

### Research Assistant | Korea National University of Transportation | Chungju-si, South Korea

September 2022 – Present

- Developed automatic brain tumor segmentation for multimodal MRI scans, with a 95% mean dice score.
- Designed a multi-teacher cross-modal knowledge distillation technique for unimodal segmentation and enhanced its clinical applicability by reducing inference time and resource consumption.
- Implemented cost-effective CNNs through INT8 quantization-aware training on embedded systems.
- Implemented continual learning with Kolmogorov-Arnold Networks based Vision Transformer to mitigate catastrophic forgetting
- **Skills:** Problem-Solving, Image Segmentation, Knowledge Distillation, Multimodal learning, Quantization, Pruning, Hybrid Transformer, Vision Transformers, Kolmogorov-Arnold Networks, Technical Writing, Computer Vision, Machine Learning, Deep Learning, Latex, PyTorch, Scikit-Learn, TensorFlow, Python, Docker

### Machine Learning Engineer | DiveDeepAI | Islamabad, Pakistan

June 2022 – August 2022

- Built a generalized machine-learning pipeline for accurate forecasting of the stock market.
- Implemented a Rule-Based Intelligent Expert Engine for Stock Market Analysis
- **Skills:** Problem-Solving, Experta, Regex, Time-Series Analysis, TensorFlow, Machine learning, Scikit-Learn

### Machine Learning Engineer | Fiverr | Remote (Freelance)

October 2021 – January 2024

- Provided services related to machine learning, deep learning, computer vision, and natural language processing.
- Completed 50+ projects with 30+ clients from 15+ countries.
- Ranked as a Level 2 Seller with 5-star average ratings.
- **Skills:** Problem-Solving, Exploratory Data Analysis, GANs, Time-Series Analysis, Natural Language Processing, Machine Learning, Deep Learning, Flask, PyTorch, Scikit-Learn, Keras, TensorFlow, Python

## RESEARCH PAPERS

Saeed Ahmad, Zahid Ullah, and Jeonghwan Gwan. **“Multi-Teacher Cross-Modal Distillation with Cooperative Deep Supervision Fusion Learning for Unimodal Segmentation.”** Knowledge-Based Systems, 2024, Impact Factor: 7.2

Saeed Ahmad, Namjung Kim, Junhwi Park, Changjook Park, Xufeng Hu, Jeonghwan Gwan. **“Implementing Cost-Effective CNNs though INT8 Quantization Aware Training on Embedded Systems”.** Korea Next Generation Computing Conference Society, Spring Conference, 2024

Sharjeel Masood, Changjook Park, Saeed Ahmad, Namjung Kim, Xufeng Hu, Jeonghwan Gwan. **“Efficient Dynamic Pruning Technique for Reduction of Inference Time in Convolutional Neural Network.”** Korea Next Generation Computing Conference Society, Spring Conference, 2024 [Awarded as an excellent paper]

## EDUCATION

### Master of Artificial Intelligence | Korea National University of Transportation | Chungju-si, South Korea

September 2022 – July 2024

- Supervisor: Professor Jeonghwan Gwak
- Thesis: Advancing Medical Image Segmentation Using Cross-Modal Knowledge Distillation and Hybrid CNN-Transformer
- CGPA: 4.38 / 4.50

### Bachelor of Computer Science | Pakistan Institute of Engineering and Applied Science | Islamabad, Pakistan

September 2018 – June 2022

- Supervisor: Dr. Muhammad Abid Mughal
- Thesis: Machine Learning Based Network Intrusion Detection System
- CGPA: 3.89 / 4.00

## SKILLS & EXPERTISE

- Machine Learning
- Deep Learning
- Computer Vision
- Time Series Analysis
- NLP
- Data Wrangling
- Data Analysis
- Python
- PyTorch
- C
- C++
- TensorFlow
- SQL
- TensorFlow
- Flask Development
- GitHub
- Azure Cloud
- Docker
- ASP.NET
- Flutter
- AWS
- Writing
- Logic Building
- Problem Solving
- Leadership
- Communication

## PROJECTS

### Anomaly detection system for industry heat radiators

October 2023 – March 2024

- Automated the real-time detection of anomalies in the industrial radiators, reducing human efforts.
- Building a customized solution to the problem, starting from data annotation to final model optimization
- Deployed containerized-based Flask application using Docker.

### A Python package for translating CSV files across multiple languages (csv-trans)

February 2023 – March 2023

- Successfully developed a Python package that translates CSV files across multiple languages, enhancing data accessibility and usability for global applications.
- Achieved significant time and effort savings by enabling bulk translations of entire files, thereby optimizing workflow efficiency for users handling large datasets.
- Over 12K package downloads

### Pipeline for video object detection and Segmentation.

September 2023 – November 2023

- Successfully Integrated YOLOv8 and Segment Anything model to automate video dataset annotation, resulting in an 80% reduction in manual labeling time.

## LANGUAGES

- English (Professional)
- Pashto (Native)
- Urdu & Hindi (Fluent)
- Korean (Basics)

## HONORS AND AWARDS

**Recipient of Professor-based Scholarship | Korea National University of Transportation | Chungju-si, South Korea**  
September 2022 – June 2024

- Participated in several NRF (National Research Foundation of Korea) funded projects under the supervision of Professor Jeonghwan Gwak
- 

**Excellent Grade Scholarship | Korea National University of Transportation | Chungju-si, South Korea**  
September 2023 – June 2024

- Received an Excellent Grade Scholarship, consecutively three times for getting a perfect GPA (4.5 / 4.5)

**2<sup>nd</sup> Position in Nationwide Cyber Security Hackathon's Quiz Competition | Ignite | Islamabad, Pakistan**  
November 2021

- Among the Top 20 universities in Pakistan
- Areas: Network security, Mobile security, Operating System, Web application and speed programming

**Among Top 10 in ETEA Entrance Test | Khyber Pakhtunkhwa, Pakistan**  
July 2018

- Entrance test organized by education testing and evaluation agency, Khyber Pakhtunkhwa
- Got Seven Positions in the ETEA entrance test 2018 among 20K students throughout Khyber Pakhtunkhwa

## REVIEWER SERVICE

- Reviewer at the Public Library of Science (PLOS One) Journal
- Reviewer at the Journal of Intelligent & Fuzzy Systems
- Reviewer at the Journal of Open Source Software (JOSS)

## VOLUNTERRING AND ORGANIZATION

**President | PIEAS Cyber Security Club | PIEAS, Islamabad, Pakistan**  
October 2021 – March 2022

- Founding Member and 1<sup>st</sup> President of the PIEAS Cyber Security Club
- Arranged Cyber Security Awareness Workshops

**ML/AI Lead | Google Developer Student Club | PIEAS, Islamabad, Pakistan**  
November 2021 – June 2022

- Arranged a 3-day online workshop for learning fundamental AI.

## REFERENCES

- **Professor Jeonghwan Gwak**
  - Associate Professor, Korea National University of Transportation
  - Email: [jgwak@uc.at.kr](mailto:jgwak@uc.at.kr)
  - Google Scholar: <https://scholar.google.com/citations?user=S4f2ALkAAAAJ>
- **Professor Asif Ullah Khan**
  - Professor and HEAD PIEAS AI Center, PIEAS, Pakistan
  - Email: [asif@pieas.edu.pk](mailto:asif@pieas.edu.pk)
  - Google Scholar: <https://scholar.google.com.pk/citations?user=C8uhO88AAAAJ>