Kashif Riyaz

AI Engineer & Backend Developer

Date of Birth	11.01.2001
Place of Birth	Sopore, India
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Work Experience

03/2025 – Present

Student Assistant (Backend Developer)

Justus Liebig University, Giessen, Germany

- Responsible for migration of analytical software tools from R to Python to improve performance and maintainability.
- Developed automatic track detection systems in HPTLC utilizing semantic segmentation techniques.
- Implemented unsupervised learning algorithms for automated chemical material detection in HPTLC images.

05/2022 – 08/2022

Student Intern

MARS Exploration Pvt Ltd, Remote

- Conducted Finite Element Analysis (FEA) of mechanical components using ANSYS.
- Designed and optimized 3D parts and assemblies using SolidWorks.
- Prepared technical documentation and presented key simulation results.

09/2022 – 10/2022

Student Intern

Indwell Automation, Mangalore, India

- Configured and programmed PLCs for basic industrial automation tasks.
- Designed HMI/SCADA screens to monitor and control plant processes in real-time.

Academic Projects

11/2025 – Present

Model Pruning & Optimization

- Implementing structured and unstructured pruning techniques to compress transformers while preserving accuracy.

- Analyzing the trade-off between model sparsity and inference latency for deployment on resource-constrained devices.
- Fine-tuning pruned models to recover accuracy loss post-compression.

05/2025 – 09/2025 **Autonomous Mobile Robot Simulation (Webots)**

- Developed a ROSbot simulation in Webots to enable autonomous navigation capabilities.
- Implemented SLAM (Simultaneous Localization and Mapping) for real-time environment mapping.
- Engineered path planning and path following algorithms for collision-free autonomous movement.

03/2025 – 06/2025 **Predictive Fault Detection in Wind Turbines**

- Built clustering models for early fault detection in wind turbines using sensor data.
- Performed data preprocessing, feature extraction, and anomaly detection.

09/2024 – 10/2024 **Robotic Arm Mastering Tic-Tac-Toe**

- Developed and implemented an autonomous Tic-Tac-Toe playing robotic arm.
- Enhanced human-robot interaction through innovative gaming experiences.

03/2024 – 07/2024 **Explainable AI Using Grad-CAM in PyTorch**

- Investigated the underlying behavior of (deep) neural networks to explain model performance.
- Visualized gradient-weighted class activation mappings (Grad-CAM).

01/2024 – 03/2024 **Python Framework for Data Acquisition via Web Scraping**

- Scraped news articles from websites to build a structured database.
- Preprocessed and developed machine learning models using the curated news dataset.

Education

03/2024 – Present **Master of Artificial Intelligence**
Ostbayerische Technische Hochschule (OTH), Amberg, Germany

- Focus: Industrial Applications.
- Focused on building machine learning and deep learning models.
- 6+ months of hands-on experience in backend software development, model development, and evaluation.

Skills

Languages	English: Proficient (C1 Listening / B2 Speaking & Writing) · German: Basic Knowledge (A2) · Kashmiri: Mother tongue
Software	Python, PyTorch, TensorFlow, Docker, Git, R (migration experience)

Data Science	Feature Engineering, Data Analysis, Deep Learning, Model Training & Optimization, Model Deployment (MLOps)

Certificates & Awards

- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning (Deeplearning.AI)
- Introduction to Machine Learning Course (Authorized by Google)
- Data Visualization (Authorized by Kaggle)