Dawood Wasif

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EXPERIENCE

STEM Instructor — May 2025 – Present
iD Tech Camps – Amazon HQ (DMV) — *Washington, D.C., USA*
- Teach **Scratch, Java, Python, and AI/ML** courses to 300+ students aged 7–17 across weekly rotating cohorts
- Create and deliver 25+ adaptive lesson plans per week integrating coding, visualization, AI tools, and game design

Research Assistant — Aug. 2024 – Present
Trustworthy Cyberpeace Lab (tClab), Virginia Tech — *Arlington, VA, USA*
- Applying **RL** reward shaping in UAV/UGV teaming for adaptive defense under human-in-the-loop constraints
- Built a **VLM+LLM** autonomous driving system with ENN, enabling uncertainty-aware decisions in real-time.
- Led research on investigating **privacy-fairness trade-offs** in **Federated Learning (FL)** for various domains.

Graduate Teaching Assistant — Aug. 2024 – May 2025
Virginia Tech, Department of Computer Science — *Falls Church, VA, USA*
- Provided academic support and guest lectures for **500+ students** and CS 5024 (Ethics & Professionalism in CS) across CS 2506 (Computer Organization), improving comprehension of technical and ethical concepts.

Machine Learning Engineer — July 2023 – Aug. 2024
DCube Tech. — *Islamabad, Pakistan*
- Engineered **spatiotemporal deep learning models** for **human action recognition and pose estimation** on warehouse CCTV footage, reducing false positives by **23%**, contributing to an estimated **$300K** annual savings
- Designed and implemented **multi-agent LLM architectures** to automate the supply chain and customer service operation pipelines for **enterprise e-commerce platforms**, increasing workflow automation efficiency by **35%**

Data Scientist — July 2022 – July. 2023
Omdena — *New York, NY, USA*
- Collaborated as Task Leader to develop an AI-powered solution addressing the issue of pipe-borne water availability in Lagos, Nigeria, improving water supply prediction accuracy by **48%** for more than **14 million residents**.
- Led a team of **50+ engineers** as a Local Chapter Lead of Islamabad to develop a **flood extent mapping system** using **computer vision and satellite imagery**, reducing disaster response times by **20%** for local NGOs

EDUCATION

Virginia Polytechnic Institute and State University — Falls Church, VA, USA
Master of Science in Computer Science, CGPA: 4.00/4.00 — *Aug. 2024 – May 2026*

National University of Science and Technology — Islamabad, Pakistan
Bachelor of Science in Computer Science, CGPA: 3.81/4.00 — *Aug. 2019 – May 2023*

ACHIEVEMENTS AND PUBLICATIONS

[A.1] **Best Green Tech Hack** - MakeUC Hackathon 2024. EcoLens (2024).
[A.2] **First Place in Privacy Track** - Hack49 Global. SafeSearch AI (2024).
[A.3] **DAAD Research Fellowship** - Chair of Data Science in Earth Observation, TUM (2022).
[A.4] **Outperforming Intern of the Cohort Award** - Neurog. First Cohort (2022).
[A.5] **Third Place Overall & Crowd Favorite Award** - DevRev Coding with AI Hackathon. AutoFlow (2022).
[P.1] **Dawood Wasif**, Yuanyuan Wang, et al. (2023). **Towards a Benchmark EO Semantic Segmentation Dataset for Uncertainty Quantification**. In *IEEE IGARSS 2023*.
[P.2] **Dawood Wasif**, Muhammad Qasim Khan, et al. (2022). **Extraction of Rice Phenological Metrics Using Temporally Correlated Multispectral Drone Imagery**. In *IEEE SITIS 2022*.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Rust, R, MATLAB, SQL, JavaScript (Node.js, Express.js), HTML/CSS
Software/Tools: Docker, Linux, Git, Jenkins, REST APIs, FastAPI, Flask, React, CI/CD, Jupyter, Visual Studio
Cloud/Big Data: AWS, GCP, Kubernetes, Anaconda, Hadoop, Snowflake, Databricks, S3, Hive, Kafka
ML/DL: PyTorch, TensorFlow, Keras, Scikit-learn, NumPy, Pandas, PySpark, Hugging Face, Transformers, LangChain
LLM/AI Tools: LLMOps (MLflow), FAISS, LlamaIndex, VectorStores, Gradio, Guidance, GPT APIs, ElasticSearch
Visualization/Analytics: Tableau, PowerBI, Microsoft Office, A/B Testing, DataDog, Looker, Zoho Analytics