Mohtashim Butt

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EDUCATION

Lahore University of Management Sciences – BS Computer Sciences   Lahore, Pakistan
Relevant Courses: Computer Vision, Machine Learning, Language Processing with Generative AI,   *Aug. 2020 – May 2024*
          Deep Learning, Introduction to AI, Software Engineering, Databases, Algorithms

PUBLICATIONS

Geographically Generalisable Urban Green Space Segmentation for Developing Countries   *Aug. 2025*
Mohtashim Butt, Nawaal Siddique, Fatima Naweed, Zubair Khalid
Conference: *IEEE International Geoscience and Remote Sensing Symposium, Brisbane, Australia* | *Poster*

PROFESSIONAL EXPERIENCE

Guest ML Researcher   **Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI)**
Supervisor: Dr. Nabeel Asim   *May. 2025 – present*
- Built a Python app (and deployed using Gunicorn/Nginx) for an explainable GAT-based network graph using D3JS to predict gut-microbe to disease links across 120 diseases for potential drug-discovery. | Tool Link
- Fine-tuned 100+ LLMs from Hugging Face for protein/DNA/RNA sequence classification, regression, and interaction.
- Deployed 32 embedding methods, 24 ML classifiers with 3 data types via containerized Python app (FLASK) | Tool
- Built an LLM-based research assistant leveraging AI agents (researcher, evaluator, experiment proposer) to suggest a novel hypothesis and research path | Tool Link

Software Engineer 1   **Careem (Uber Inc.)**
Dubai, UAE (remote)   *August. 2024 – May 2025*
- Updated a GOLANG microservice to add a bot for automatically creating a JIRA ticket against a Slack message.
- Stabilized two Go microservices by adding test coverage, optimizing SLO/SLA latencies, mitigating security vulnerabilities, and onboarding services to Dynatrace.
- Migrated a legacy internal tool to a Java+TypeScript+Vite micro-frontend, integrating it into Careem's central portal adopted by the Food team.
- Built a cross-microservice monitoring dashboard with SQL, Python, and internal tools, later adopted by the central engineering department for monitoring microservices.

Machine Learning Intern   **Centre for Water Informatics and Technology**
Lahore, Pakistan   *May. 2023 – June. 2023*
- Integrated four ESP-32 cameras to develop a low-cost unit for capturing a multi-directional (360°) view.
- Automated image capture, upload, and retrieval via a self-hosted site using PHP, Python, Arduino, and HTML.
- Fine-tuned a tiny-Yolov5 model for forest fire detection in the retrieved images to trigger an alarm. | Final Report

PROJECTS (2023-2024)

Multi-Modal Conversational Story Generator   **OpenAI API, GPT-3.5, DALL-E, BERT, Deployment**
- Fine-tuned BERT/GPT-3.5 on STORIUM dataset as a storyline guidance model following MCQA approach.
- Leveraged GPT-3.5 API for paragraph generation and DALL-E stable diffusion model for image generation. | Poster
- Deployed the project's frontend (JS) on Vercel and backend (python) on Pythonanywhere | Deployed Project Link

Learning Management System in MERN   **MongoDB, Javascript, REST APIs**
- Implemented frontend (in React JS) and backend (in Express) of a role-based access LMS.
- Created db schema, set up MongoDB cluster, and applied CRUD operations via self-engineered API calls. | Code

TEACHING EXPERIENCE

- Teaching Assitant for **CS-473: Deep Learning** under Dr. Murtaza Taj for (Spring 2025)
- Teaching Assitant for **CS-360: Software Engineering** under Dr. Maryam Ghafoor (Spring 2024)

LANGUAGES & FRAMEWORKS

Python, Go, TypeScript, Django, C/C++, HTML, CSS, PHP, Haskell, Arduino, NLTK, scikit-learn, Matplotlib, Cuda, Git, Docker, Kaggle, Hugging Face, Roboflow, REST APIs, Proteus, AI Automation, LLM fine-tuning, Generative AI.