Mohtashim Butt

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INDUSTRY EXPERIENCE

Technical Content Intern   Educative Inc.

Area: Research and Development   *June. 2023 - Aug. 2023*

- Conducted extensive research about the topics related to computer vision, computer graphics, and ML and curated around **58** quality articles.
- Worked closely with the senior Technical Content Engineers in setting up docker files and pushing them to Educative's docker repository. | My profile.

Low-cost multi-camera module for forest fire detection   Centre for Water Informatics and Technology

Area: Software Development for IoT Devices (Internship)   *May. 2023 - June. 2023*

- Integrated four ESP-32 Camera Modules to develop a low-cost multi-directional (360°) view.
- Wrote scripts (in PHP, Arduino, and Python) to send captured images to a hosting server and retrieve them to the local PC.
- Processed the images using a PyTorch Yolov5 model for forest fire detection to trigger an alarm upon potential detection | Final Report

PROJECTS

Geographically transferable DL model for urban greenspace segmentation   Bachelor's Thesis

Supervisor: Dr. Zubair Khalid (Ph.D. Australian National University)   *Aug. 2023 – Ongoing*

- Merging the greenspace polygons from different GIS sources using Python scripting in QGIS software as a basis for our training data.
- Developing a Deep Learning model that segments the input satellite imageries as a certain greenspace class while maintaining geographical transferability | In-Progress Report.

Ta'awun | JavaScript, React, Figma, Firebase   View source code

A welfare web portal for donors and NGOs to donate and collect monetary and non-monetary funds

- Took the lead in developing a user-friendly UI, and engaged in discussions with a couple of NGOs and donors to come up with a better UX | Figma Design.
- Developed most of the application's frontend in React JS and led the frontend testing sprints.

An assistive application for people with ADHD   HCI Research Project

Supervisor: Dr. Suleman Shahid (Ph.D. Tilburg University)   *Sept. 2022 - Jan. 2023*

- Designed interview protocols and conducted semi-structured interviews with 20 adult participants diagnosed with ADHD.
- Inspected and measured the gravity of hyperactivity and mental struggle among ADHD individuals.
- Thematically analyzed the data to extract meaningful insights and developed interactive designs to help people with ADHD cope with their hyperactivity: Final Report | Figma Prototypes

TEACHING EXPERIENCE

Teaching Assistant   Software Engineering (CS-360)

Instructor: Dr. Maryam Abdul Ghafoor   *Spring-2023 (on-going)*

- Helped the instructor by grading components, conducting office hours, delivering tutorials and making the documentation deliverables for the project.
- Engineering final projects in collaboration with DevSinc, Ebryx, and emerging AI startups.

SKILLS

- **Languages** / **Frameworks:** C, C++, Python(w/ NumPy, sci-kit learn, pandas, Keras, TensorFlow, PyTorch), MATLAB, TypeScript, React, SQL, CSS, Figma, HTML, Haskell, Proteus, Arduino, Content Writing.

EDUCATION

Lahore University of Management Sciences – BS Computer Sciences   Lahore, Pakistan

Relevant Courses: Software Engineering, Advanced Programming, Computer Vision, Machine Learning, Speech and Language Processing with Generative AI, Deep Learning, HCI, ICT4D   *Aug. 2020 – May 2024*