Muhammad Talal Qaiser
Software Engineer

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SKILLS:

Programming Languages: C++, C#, JavaScript, Python, SQL

Web Development Frameworks: WebGL, Three.js, Node.js, HTML, CSS

Dev/Ops/Cloud: AWS, Docker, Git, Ansible, Terraform

Other Tools: Simatic, TIA, Linux, Unity, Blender, TensorFlow, PyTorch

EDUCATION:

Masters in Simulation and Visualization
NTNU, Norway (2021-2023)
Bachelors in Mechanical Engineering
NUST, Pakistan (2014-2018)

(Data Processing, Machine Learning, Computer Graphics, Web Development)

PROJECTS:

Master's Thesis:
Turbine Failure Prediction using machine learning and deep learning, achieving 90% accuracy with real-world data.
Tools: Python, Pandas, TensorFlow, PyTorch, MLP, LSTM, CNN

Front-End Development Projects:
- **Interactive dashboard** for COVID-19 cases, tracking using **real-time** data and visualized trend on web interface.
- **Interactive webpage** for a boat rental business with dynamic features including maps and login system.
- **Interactive solar system simulator**, dynamically calculating orbital speed and volume ratios for realistic experience.
Tools: JavaScript, HTML, CSS, Node.js, WebGL, Three.js, Python, Dash, Plotly

Computer Graphics:
Developed a 3D city simulator showcasing real-time environmental interactions and navigation.
Tools: Unity, C#

Other ML/DL Projects:
Predictive analytics for suicide cases, image recognition, and COVID-19 forecasting.

WORK EXPERIENCE:

ASSOCIATE SOFTWARE ENGINEER – Talent Pool (Vision Technology)

NOV, Kristiansand, Norway
July 2024 - Present

- Developing **software applications and APIs** for the **Multi-Purpose Perception Package (MP3)** as a part of hands-free initiative.
- **Developed the custom application** to run photoneo scanners on jetson with ARM architecture, overcomming the lack of any current official solution from photoneo.
- Automated installation processes using **shell scripts and Debian packages**, reducing deployment time significantly.
- Conducted **comprehensive testing** of scanners to evaluate point cloud data quality under different conditions for optimal sensor selection as a part of MP3.
- Automated the process of **updating configuration setup and measurements of rig survey calculation** for new SHD (Stickup Height Detector) deliveries, reducing manual effort and saving considereable time.
- Contributing to **feature improvements** and **SHD deliveries**

Skills: C++, C#, Python, Docker, Linux, shell, scrum, kanban, Debian, GitHub, OpenCV, cmake

ASSOCIATE SOFTWARE ENGINEER – Talent Pool (Simulation)

NOV, Kristiansand, Norway
August 2023 – July 2024

- **Deployed and maintained cloud simulators** using AWS, optimizing simulation performance and improving operational efficiency.
- Provided ongoing user support for simulator, troubleshooting technical issues, addressing support requests, and ensuring smooth system operations.
- Integrated **PLC software** (Simatic, TIA, Twincat) into simulation environments.
- **Simulator responsible** for Stena Carron, Tom Madden, BP Ace update, and DVD

Skills: AWS, Cloud, PLC, Siemens, Jira, Ansible, Terraform, GitHub, MS Excel

STUDENT RESEARCH ASSISTANT – Digital Twin

NTNU, Ålesund, Norway
June 2022 – September 2022

Developed a **Digital Twin of Hywind Tampen wind farm**, enabling the simulation of various scenarios and estimated power production by analyzing based on historical weather conditions.

Skills: Unity, C#, Python UI, Machine Learning, Data Analysis

ASSISTANT MANAGER – Process Improvement

Style Textile, Pakistan
September 2018 – August 2021

Spearheaded business improvement, cost and waste reductions projects. Worked with IT to develop and display multiple dashboards and KPIs across functional teams and led a team collaborating with Toyota experts for introducing automation and robotics in industrial application

Skills: SQL, Qlik, Minitab, MS Excel, Data Analysis