ZAIN UL ABIDEEN

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SUMMARY

Dynamic and passionate engineer with a strong foundation in artificial intelligence, autonomous systems, and vehicular robotics. Proven experience in project management and advanced technologies, coupled with leadership in managing a vibrant student robotics team. Eager to contribute my expertise and drive to advance research in intelligent transportation systems at your esteemed institution. Adapted to work and learn individually while handling some group projects as a leader.

EDUCATION

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (Swabi, KPK)
BS-Electrical Engineering *Sep 2020 – Jul 2024*

- DHL Winner (8 times)
- CGPA: 3.78/4 (Summa Cum Laude)

Aga Khan Higher Secondary School (Karachi, Sindh)
Higher Secondary (Intermediate) Education *Sep 2018 – Jun 2020*

- A1 Grade
- Highest Class Grade

LEADERSHIP EXPERIENCE

TMC (Karachi, Sindh)
SAP BTP AI Consultant *Jul 2024 – Present*

- Implemented AI solutions for a FMCG company, enhancing forecasting accuracy and inventory management.
- Developed robust enterprise data management frameworks using SAP BTP, ABAP, CDS, and OData services.

Team Techno (Swabi, KPK)
Director of Robotics at Team Techno *Feb 2020 – Jul 2024*

- Led the AI team in integrating 8 robotic modules for seamless operation.
- Managed 3 teams as the module head for various competitions, winning 2 IEEE competitions, including NEO22 and YOUTH ROBO 23.
- Conducted workshops for freshmen and sophomore students, introducing them to the world of AI and robotics.

Bitsol Technologies (Islamabad, Punjab)
AI/ML Engineering Intern *Jun 2023 – Jul 2023*

- Developed a decision-making algorithm for Autonomous Vehicle using FSM method.
- Contributed to a project on Brain Tumor Detection using the UNET Model for image segmentation.
- Got the hands-on experience with deep learning frameworks and trained a model for scene understanding.

Siemens (Karachi, Sindh)
Electrical Engineering Intern *Jul 2023 – Aug 2023*

- Collaborated with a team to extend transformer lifespan by up to 30% for NTDC using IoT solution.
- Gained holistic understanding of multinational operations through immersive exploration of diverse departments.

Textile Specialty Chemicals (Karachi, Sindh)
Supply Chain Intern *Jun 2022 – Jul 2022*

- Streamlined procurement procedures, enhancing efficiency at Textile Chemicals.
- Facilitated seamless collaboration across departments to ensure punctual material delivery.

PROJECT EXPERIENCE

AI Based Autonomous Robot (Final Year Project)

- Focused on developing autonomous navigation systems with 95% obstacle detection accuracy and advanced scene understanding and environmental perception capabilities, integrating decision-making algorithms for efficient and safe navigation. Implemented real-time sensor fusion and machine learning models to enhance object detection and route optimization, resulting in a robust system capable of navigating complex environments autonomously. Secured 2nd position in the faculty competition for innovation in autonomous systems.

SAP BTP AI (Business AI Solution)

- Developed a Business AI solution for a local FMCG company by customizing a machine learning model trained on core SAP ABAP data. The predictive model achieved over 85% accuracy for the production department, demonstrating effective ML model customization and implementation.

Net Cafe Management Program

- Developed a C++-based management system for a local internet café as part of a university project. The program efficiently tracked over 100 members, their data usage, billing, and session records. Successfully implemented and deployed the system on-site, resulting in streamlined operations and reduced manual record-keeping by 80%.

Brain Tumor Detection

- Developed a brain tumor detection program utilizing MRI images as input, employing UNet for semantic segmentation on the BRATS dataset and clinical MRI scans from Aga Khan Hospital Karachi to achieve enhanced accuracy in tumor detection.

Implemented the LIFI System

- Li-Fi is a light communication system. Transferred the 8-bit data to smartphone using LIFI with the encoding and decoding of the data.

Facial Recognition Program

- Made a facial recognition program for PC. Machine Learning and Computer Vision (OpenCV) were used for training and recognition in program. Could detect 5 faces at a time.

IoT-Based Transformer Life Increment

- IoT-based system designed to extend the life of a 65VA transformer for a specified building. Integrated sensors and IoT technology to monitor performance, optimizing transformer efficiency and reducing wear.

HONOURS AND AWARDS

Dean's Honor List
8 times winner of DHL.

GIKI Alumni Association Scholarship Awardee
GIKIAA Scholarship fully-funding my BS degree.

National Electronics Olympiad Winner
Won NEO22 (ROBORACE Module)

2nd Position in Pre-Engineering
Intermediate Exams BIEK AKHSS.

CONFERENCES AND SEMINARS

5th International Conference on Robotics and Automation in Industry (ICRAI 2023)

International Conference on Artificial Intelligence by IEEE (ICAI'23)

DevFest Karachi (2022)

LES ENNOVATE Intra GIK Event (2022)

ADDITIONAL COURSES

Machine Learning (Stanford University)

Image and Video Processing (Duke University)

Getting Started with AI on Jetson Nano (NVIDIA Deep Learning Institute)

SKILLS & PERSONAL

Languages: English (proficient), Urdu (proficient)
IT: Robotics, Python, C++, AI, ML frameworks, Proteus, Arduino, MATLAB, Logic Designing, Creative Writing