



Shakeel Ahmed

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PROFESSIONAL SUMMARY

Robotics and AI focused Mechatronics graduate student with 7 years of Biomedical Engineering work experience. Currently I am researching about robotic applications simulating them on Isaac Sim (Nvidia Omniverse platform), ROS2, Computer Vision and processing NLP to robot commands. My research focuses on a vision-guided robotic manipulator while implementing LLMs for enhanced autonomy and motion generation. I am a performance-oriented and meticulous professional, owning robust analytical, organizational, & team leadership skills to drive projects from inception to success.

EDUCATION AND TRAINING

Master's in Opto-Mechatronics, Taoyuan, Taiwan

National Central University

[Feb'23 – June'25]

Robotics, ML/DL and Computer Vision

B.Sc. Biomedical Engineering Technology, Lahore, Pakistan

University of Engineering and Technology New Campus

[Sep'13 – Oct'17]

Biomedical Instrumentation, Imaging and Microcontrollers

Sales and Service Training

Getinge Group Dubai, UAE

[Sep'17 – Oct'17]

Website: <https://www.getinge.com/int/>

WORK EXPERIENCE

Biomedical Engineer/Clinical Engineer Level-I

Shaukat Khanum Memorial Cancer Hospital and Research Centre

[Nov'17 – Feb'23]

Job Place: Lahore, Pakistan

- Medical equipment fault finding, PCB troubleshooting, maintenance and calibration programs for critical medical equipment including laparoscopy systems, ventilators, infusion pumps to CSSD equipment
- Managed biomedical operations across Operation Rooms, CSSD, and In-patient departments, serving a 200+ bed cancer hospital
- Implemented data-driven maintenance scheduling using HIS (Hospital Information System), reducing equipment downtime by 30% and improving response times
- Directed installation and commissioning of complex medical systems, coordinating with vendors and clinical teams
- Achieving KPIs according to ISO 9001:2008 and JCI (Joint Commission Intl.) including equipment procurement initiatives, focusing on needs assessment, site planning and end-user training

Product Specialist

Mediland Pakistan

[July'17 – Nov'17]

Job Place: Lahore, Pakistan

- Led technical and financial proposal development for CSSD (Central Sterile Services Department) equipment, resulting in successful compliance documentation and contract acquisitions
- Designed and optimized CSSD facility layouts using 2D CAD, improving workflow efficiency for multiple healthcare facilities achieving KPIs

DIGITAL SKILLS

Robotics and AI / Nvidia-Isaac Sim / Python / Arduino / Experience with LLMs / Solid Works / IoT

ONLINE LEARNING

Nvidia DLI Courses, Python Courses, ML, DL, Computer Vision Courses

- Platforms: Nvidia DLI, mygreatlearning, coursera, cisco, deeplearning, youtube etc.

PROJECTS

Robotics, Computer Vision and AI

[May'24 – June'25]

Running Simulation inside Isaac Sim (Nvidia's Tool) while implementing LLM, ROS2 and Computer Vision models like YOLO, Synthetica RT-DETR on a 6-DoF robotic manipulator

Auto-Resuscitator (Amboxtronic)

[Apr'20 – Oct'22]

In a team at SKMCH, I had a role to work with circuit designing and doing programming for Arduino in this budgeted project idea of designing a resuscitator from ambo-bag.

Wifi-TMCD

[Jan'19 – Feb'20]

Wifi- Temperature Monitoring and Controlling Device was designed by two members team which improved monitoring and efficiency of hospital machines to save samples threatened by temperature dependent equipment breakdown

CONFERENCE PAPER

Analysis of Magnetic Field in Electromagnetic Actuated Implant Stability Assessment

20th Int'l Conference on Automation Technology, Taipei, Taiwan

[Dec'23]

NOTABLE ACHIEVEMENTS

5-Years Long Service Award and Employee of the Year

Shaukat Khanum Memorial Cancer Hospital and Research Centre

[Feb'23]

Innovative Engineering Approach

Shaukat Khanum Memorial Cancer Hospital and Research Centre

[Feb'22]

PEF National Scholarship

University of Engineering and Technology

[Oct'13 – July'17]