SYED JAWAD AKHTAR

COMPUTER ENGINEER

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EDUCATION

Bachelors in Computer Engineering
Zakir Husain College of Engineering and Technology

📅 2016 – 2020   📍 Aligarh, India

Senior Secondary Education
International Indian School

📅 2016   📍 Jeddah, Saudi Arabia

Central Board of Secondary Education

Secondary Education
International Indian School

📅 2014   📍 Jeddah, Saudi Arabia

Central Board of Secondary Education

EXPERIENCE

Summer Research Internship
The University of Kiel

📅 June 2019 – August 2019   📍 Kiel, Germany

- Learning Artificial Neural Networks (ANN) and it's applications on Geo-mechanics
- Analytical ANN for predicting thermal conductivity of sands and rocks based on porosity, saturation and seismic wave velocities.

Chairperson
Autonomous Underwater Club (Marine Technological Society) - ZHCET

📅 August 2019 – July 2020   📍 Aligarh, Uttar Pradesh

- Mentor of MATE ROV competition
- Organizing workshops and seminars for awareness of underwater robotics
- Vehicle simulation in Gazebo Robotics Simulator
- Detailed studying and implementation of acoustic localization on the AUV

Summer Intern
Saudi White Cement

📅 June – July 2018   📍 Saudi Arabia

- Training on securing and protecting a production company digitally- Tutored on N+ CompTIA course
- Hands on Experience of ERP (Enterprise Resource Planning) - Oracle
  Describing Cash Flow, Inventory & other major modules used in a manufacturing company

PROJECTS

Deep Reinforcement Learning on AUVs - Final Year Project
Zakir Husain College of Engineering & Technology

📅 August 2020   📍 India

Phase 1: Simulation of AUVs for detecting underwater pipeline defects using Reinforcement Learning.

Phase 2 - Comparative study of RL optimizers (SAC & PPO) for completing the tasks.

Tools & Algorithms: Gazebo Simulator, Unity, Robot Operating System (ROS), RViz, Blender, Google Sketch-up

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Acoustic Localization on AUV's
Autonomous Underwater Vehicle Club

📅 January 2019   📍 India

Localization of a beacon underwater, using an array of hydrophones on an unmanned underwater vehicle.

Tools & Algorithms: NI Labview, NI MyRIO board, Time Delay of Arrival (TDOA), Aquarian H1C hydrophones

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Camera Tuning using Deep Reinforcement Learning
Zakir Husain College of Engineering & Technology

📅 December 2018   📍 India

Deep reinforcement learning implemented to tune white-balance settings of camera app according to the environment. - **Minor Project of Junior year**

Tools & Libraries: Keras library, socket programming, CNN data set MobileNetV2, Android App programming (Java)

SCORES

English Proficiency Test
TOEFL iBT

📅 09 November 2019   📍 New Delhi, India

Highest Score: 96/120, Reading – 24/30, Listening – 22/30, Speaking – 25/30, Writing – 25/30

RESEARCH

Effective thermal conductivity of unsaturated sand using artificial neural network (ANN) and lattice element method (LEM) - [Link]

International Journal of Thermal Sciences

📅 February 2020

Project: GeoMInt - Geomechanical integrity of host and barrier rocks - experiment, modeling and analysis of discontinuities

Estimation of seismic wave velocities of crustal metamorphic rocks using ANN - [Link]

Materials today: Proceedings

📅 December 2019

Project: GeoMInt - Geomechanical integrity of host and barrier rocks - experiment, modeling and analysis of discontinuities

Effective thermal conductivity of unsaturated soils based on deep learning algorithm - [Link]

2nd International Conference on Energy Geotechnics

📅 March 2021   📍 La Jolla, California

- Accepted
- Project: BioSolidEncap - Stabilisation of Tailing slopes by controlled Bio-cementation

PATENTS

A low cost Autonomous Underwater Vehicle having five degrees of freedom and two thrusters

📅 March 2018   📍 United States

- U.S. Patent Filing No. **15949553**

6 Pin Underwater Electrical Connector

📅 July 2018   📍 India

- Indian Patent Application No. **201811027144**
- **Published**

SKILLS

Robot Operating System | Gazebo Robotic Simulator

Unity Game Engine | Google Sketch Up | Simulink

Labview | Android Studio | LaTeX

Photoshop CS6 | Premeire CS6 | Audition CS6

LANGUAGES

C | C++ | Java | Python | Java | MATLAB | SQL

Markdown

ACHIEVEMENTS

🏆 **Students Autonomous Underwater Vehicle Competition 2019**
Won 4th position nationally - computer team member

🏆 **Singapore AUV Challenge 2018**
Lead the team and won the Best AUV award

🏆 **Co - Founder of AUV ZHCET Club**
One of the founding members of the technical club in college

🏆 **Top 4 Idea Presentation**
"AUV Surveillance" at Inspiring Entrepreneurs Summit 2018, Saudi Arabia

🏆 **1st Prize in Mobile app Mock up competition by IEEE**
Made an app for foodies and food makers ranging from professional chefs to moms to share recipes - The Food Up app

☁ **HackDTU Hackathon**
Implemented & showcased an online car parking system

🏆 **School Topper**
In Senior secondary school, bagged the first position at school level by scoring 96 % in Computer Science subject

STUDENT MEMBERSHIPS

IEEE Oceanic Engineering
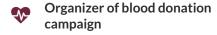
Zakir Husain College of Engineering & Technology

📅 March 2019   📍 India

Marine Technology Society

Zakir Husain College of Engineering & Technology

📅 April 2020   📍 India

CO-CURRICULAR

❤ **Organizer of blood donation campaign**

📷 **Official Photographer of hall festival**

🏆 **First prize in photography competition in hall festival**

💻 **Social Media manager at Recrufest 2018 - A Mega Job fair**

WORKSHOPS/CONFERENCES

- **NoSQL, Bigdata & Artificial Intelligence Conference by Datumcom**
- **UAV's and Drones**
- **Android Web Development and Web Designing**

LEARNING

- **Deep Learning A-Z**^{TM} – Hands on Artificial Neural Networks Proficiency course on Python on Udemy
- **Artificial Intelligence for Robotics** – course provided by Udacity (April. 2020)
- **Data Analysis and Machine Learning using Python** – By Dept. of Mechanical Engineering, Zakir Husain College of Engineering and Technology (Jan. 2019)
- **Programming for Robotics - ROS** – By Institute of Robotics and Intelligent Systems, Robotics Systems Lab, ETH Zurich (Dec. 2018)

REFERENCES

Prof. Dr.-ing habil. Frank Wuttke

Chair of Geomechanics and Geotechnics

@ Institute of Applied Science

✉ fw@gpi.uni-kiel.de

Institute of Applied GeoScience
The University of Kiel
Kiel-24118, GERMANY

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Dr. Saleem Anwar Khan

Associate Professor

@ Zakir Husain College of Engineering & Technology

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Department of Mechanical Engineering
Zakir Husain College of Engg. & Tech.
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Aligarh-202002, INDIA

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Dr. Rashid Ali

Associate Professor

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