

SYED JAWAD AKHTAR

COMPUTER ENGINEERING STUDENT | Student Coordinator AUV ZHCET Club

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EDUCATION

Bachelors in Computer Engineering

Zakir Husain College of Engineering and Technology

📅 2016 – Present 📍 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 its applications on Geo-mechanics
- Analytical ANN was used for predicting different properties of sands and rocks. Like Thermal conductivity of sand based on porosity and saturation and seismic wave velocities of rocks using different chemical compositions

Student Partner

Bolt IoT

📅 May 2019 – July 2019 📍 Aligarh, Uttar Pradesh

- The tasks undertaken by me were to popularize the concepts of Internet of Things (IoT) and Machine Learning (ML), brand awareness and business development of the Bolt IoT board and ML online video training.

Co Coordinator

Autonomous Underwater Club - ZHCET

📅 August 2018 – May 2019 📍 Aligarh, Uttar Pradesh

- Vehicle simulation in Gazebo Robotics Simulator
- Detailed studying and implementation of acoustic localization on the AUV
- Social media manager and outreach manager

Summer Intern

Saudi White Cement

📅 June – July 2018 📍 Saudi Arabia

- Training of security systems in an industrial company - Tutored on N+ CompTIA course
- Hands on Experience on ERP (Enterprise Resource Planning) - Oracle Describing Cash Flow, Inventory & other major modules used in a manufacturing company

PROJECTS

Camera Tuning AI using Deep Reinforcement Learning

Zakir Husain College of Engineering & Technology

📅 December 2018 📍 India

Deep reinforcement learning implemented to tune white-balance settings of android camera according to the environment. -

Minor Project of Junior year

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

Acoustic Localization on AUV's

Autonomous Underwater Vehicle Club

📅 January 2019 📍 India

Localization of a beacon underwater using an array of hydrophones attached to the vehicle.

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

Making a micro UUV - Final Year Project

Autonomous Underwater Vehicle Club

📅 August - On going 📍 India

Phase 1: Simulation of Unmanned Underwater Vehicles (UUV) for detecting underwater pipeline defects using Reinforcement Learning.

Phase 2 - Building a miniature AUV for real-life demonstration

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

RESEARCH

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

International Journal of Thermal Sciences

📅 February 2020

- <https://doi.org/10.1007/s00231-020-02833-w>
- Project: GeoMInt - Geomechanical integrity of host and barrier rocks - experiment, modeling and analysis of discontinuities
Authors: Zarghaam Haider Rizvi, Husain Haider Zaidi, Syed Jawad Akhtar, Amir Shoarian Sattari, Frank Wuttke

Estimation of seismic wave velocities of crustal metamorphic rocks using ANN

Materials today: Proceedings

📅 December 2019

- <https://doi.org/10.1016/j.matpr.2019.11.320>
- Project: GeoMInt - Geomechanical integrity of host and barrier rocks - experiment, modeling and analysis of discontinuities
Authors: Zarghaam Haider Rizvi, Syed Jawad Akhtar, Jorg Follmann, Frank Wuttke

Effective thermal conductivity of unsaturated soils based on deep learning algorithm

2nd International Conference on Energy Geotechnics

📅 September 2020

📍 La Jolla, California

- In review
- Project: BioSolidEncap - Stabilisation of Tailing slopes by controlled Bio-cementation
Authors: Zarghaam Haider Rizvi, Syed Jawad Akhtar, Wurood Sabeeh, Frank Wuttke

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

Google Sketch Up

Simulink

Labview

Android Studio

LaTeX

ACHIEVEMENTS



Students Autonomous Underwater Vehicle Competition 2019

Overall 4th position of the team nation wide - was in the computer team



Singapore AUV Challenge 2018

Lead the team and reached the preliminary round



Co - Founder of AUV ZHCET Club

One of the founding members of the technical club in the college



Top 4 Idea Presentation

on AUV Surveillance at Riyadh Inspiring Entrepreneurs Summit 2018



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

Showcased and implemented an online Car Parking system



School Topper in Computer Science subject

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 at blood donation campaign



Official Photographer of hall festival



First prize in photography competition in hall festival

Photoshop CS6

Premiere CS6

Audition CS6

WORKSHOPS/CONFERENCES

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

LEARNING

- **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)
- **Deep Learning A-Z™** – Hands on Artificial Neural Networks Proficiency course on Python on Udemy

LANGUAGES

C

C++

Java

Python

Java

MATLAB

SQL

Markdown

REFERENCES

Prof. Dr.-ing habil. Frank Wuttke

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Dr. Saleem Anwar Khan

Associate Professor

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