

SYED JAWAD AKHTAR

COMPUTER ENGINEER

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in syed-jawad-akhtar syedjawadakhtar

EDUCATION

Bachelors in Computer Engineering
Zakir Husain College of Engineering and Technology
2016 – 2020 Aligarh, India

Secondary Education & High School
International Indian School
2012-2016 Jeddah, Saudi Arabia
Central Board of Secondary Education

EXPERIENCE

Research Internship
The University of Kiel
June 2019 – August 2019 Kiel, Germany

- Applying Artificial Neural Networks (ANN) on Geo-mechanical engineering.
- Use of analytical ANN for predicting thermal conductivity of sands and rocks from all around the world.
- Code documentation and article writing for paper publication.

Chairperson
Autonomous Underwater Club (Marine Technological Society) - ZHCET
August 2019 – July 2020 Aligarh, Uttar Pradesh

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

Summer Intern
Saudi White Cement
June – July 2018 Saudi Arabia

- Training on security aspects of a production company - 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 Engg. & Tech.
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: Unity, ml-agents, ROS, Gazebo, RViz, Blender, Google Sketch-up

Acoustic Localization of 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: Labview, NI MyRIO board, Aquarian H1C hydrophones, Time Delay of Arrival (TDOA)

Camera tuning using Deep Reinforcement Learning
Zakir Husain College of Engg. & Tech.
December 2018 India

DRL used to tune white-balance settings of camera app according to the environment while taking pictures - **Minor Project - Junior year**

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

LANGUAGES/SKILLS

C C++ Python Java MATLAB
C# SQL
ROS 1 & 2 Gazebo Unity Blender
Simulink LabView Android Studio
LaTeX Markdown
Photoshop CS6 Premiere CS6
Audition CS6

PUBLICATIONS

Effective thermal conductivity of unsaturated soils based on deep learning algorithm - [\[Link\]](#)

2nd International Conference on Energy Geotechnics

📅 November 2020

📍 La Jolla, California

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

International Journal of Thermal Sciences

📅 February 2020

Estimation of seismic wave velocities of crustal metamorphic rocks using ANN - [\[Link\]](#)

Materials today: Proceedings

📅 December 2019

📍 Mathura, India

PATENTS

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

U.S. Patent Filing No. 15949553

📅 March 2018

📍 United States

6 Pin Underwater Electrical Connector

Indian Patent Application No. 201811027144

📅 July 2018

📍 India

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.

WORKSHOPS/CONFERENCES

- Presenter - 10th International Conference on Materials Processing and Characterization (ICMPC - 2020
- NoSQL, Bigdata & Artificial Intelligence Conference by Datumcom
- Introduction to UAV's and Drones
- Android Web Development and Web Designing

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 to share recipes - The Food Up app



HackDTU Hackathon

Implemented & showcased an online car parking system



School Topper

In high school, 1st position by scoring 96 % in Computer Science

STUDENT MEMBERSHIPS

IEEE Oceanic Engineering

Zakir Husain College of Engg. & Tech.

📅 March 2019

📍 India

Marine Technology Society

Zakir Husain College of Engg. & Tech.

📅 April 2020

📍 India

COURSES

- Self-Driving Cars with ROS 2 and Autoware – ApexAI
- Deep Learning A-Z™ – Hands on Artificial Neural Networks Proficiency course on Python - Udemy
- Programming for Robotics - ROS – By Institute of Robotics and Intelligent Systems, Robotics Systems Lab - ETH Zurich
- Artificial Intelligence for Robotics – Udacity

CO-CURRICULAR



Blood donation campaign organizer



Official Photographer of hall festival



First prize in photography competition in hall festival



Social Media manager at Recrufest 2018 - A Mega Job fair

REFERENCES

Prof. Dr.-ing habil. Frank Wuttke

Chair of Geomechanics and Geotechnics

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Dr. Saleem Anwar Khan

Professor

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Department of Mechanical Engineering

Zakir Husain College of Engg. & Tech.

Aligarh Muslim University

Aligarh-202002, INDIA

Dr. Rashid Ali

Associate Professor

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Aligarh Muslim University

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