

# SYED JAWAD AKHTAR



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## EDUCATION

Masters in Computer Science and Engineering

University of Oulu

2021 – Present    Oulu, Finland

Bachelors in Computer Engineering

Zakir Husain College of Engineering and Technology

2016 – 2020    Aligarh, India

## EXPERIENCE

Research Assistant

University of Oulu

June 2022 - Present    Oulu, Finland

- Researching on use of 360 cameras & VR headsets with tele-presence robots to improve immersive experience.

Intern - IT Advisory

RSM Saudi Arabia

August 2021    Riyadh, Saudi Arabia

- Auditing companies according to the cybersecurity controls of Saudi ARAMCO.
- Streamlining client requests and complete process of obtaining the compliance certificate using ServiceDesk Pro by ManageEngine.

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

Research Internship

The University of Kiel

June 2019 – August 2019    Kiel, Germany

- Applying Artificial Neural Networks (ANN) on Geo-mechanical engineering.

## PROJECTS

Telepresence robots with 360 camera

University of Oulu

August 2022    Finland

Goal: To view the live stream from a 360° camera (wirelessly) in an HMD and move the robot using the HMD controllers.

Tools & Algorithms: THETA Z1 & V 360 cameras, Probot DOLLY robot Oculus VR.

Visual disparities in VR using Unity

University of Oulu

December 2021    Finland

Making an application with 3 different visual disparities.

Tools & Algorithms: Unity and C#.

Targeted Advertising using IoT

University of Oulu

December 2021    Finland

Made a client-server architecture using MQTT protocols to detect age-gender of a person to show them a relevant advertisement.

Tools & Algorithms: Python, MQTT, Mosquito broker, Gender-Age detector

Deep Reinforcement Learning on AUVs - Final Year Project

Zakir Husain College of Engg. & Tech.

August 2020    India

Simulation of AUVs for detecting underwater pipeline defects using RL. 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: NI MyRIO, Aquarian H1C, Time Delay of Arrival (TDOA)

## PUBLICATIONS

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Effective thermal conductivity of unsaturated soils based on deep learning algorithm

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)

International Journal of Thermal Sciences

📅 February 2020

Estimation of seismic wave velocities of crustal metamorphic rocks using ANN

Materials today: Proceedings

📅 December 2019

📍 Mathura, India

## PATENTS

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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

## LANGUAGE/SKILLS

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## WORKSHOPS/CONFERENCES

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- 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

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🏆 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

## COURSES

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- 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

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- 📍 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