# OMSRI KUMAR AEDDULA


CONTACT INFORMATION

PhD ( August 2019 – Present)
Blekinge Institute of Technology, Karlskrona, Sweden
✆ +46-709468941
✉ omsri.kumar.aeddula@bth.se


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RESEARCH INTERESTS

- Artificial Intelligence
- Signal/Image Processing
- Computer Vision
- Machine Learning
- Deep Learning
- Artificial Neural Networks

EDUCATION

**Blekinge Tekniska Högskola**: BTH, Karlskrona, Sweden.
Master of Science in Electrical Engineering with emphasis on Signal Processing (2016-2017)
Master Thesis Grade – A
Supervisor: Irina Gertsovich

**Jawaharlal Nehru Technological University**: JNTU, Hyderabad, India.
Bachelor of Technology in Electronics and Communication Engineering (2012-2016)
Grade – A

PUBLICATIONS

**Omsri Kumar Aeddula**, Irina Gertsovich, "Image Based Localization System", 8th ICIECE Conference, August 2019.

**Om Sri Kumar Aeddula.** Automatic Image Based Positioning System.
(Digital Scientific Archive, URN: urn:nbn:se:bth-15224 )

AWARDS

- Recipient of Scholarship from BTH for academic performance, 2016 – 2017.
- Recipient of Scholarship at School level for securing first place in state level examination.
- Full time Project Assistant (January 2017- July 2019) in Blekinge Institute of Technology for:
  - Scale autonomous machine development, collaborative project with Volvo Construction Equipment.
  - Implementation of Computer Vision and Machine Learning techniques in Swedish Age Assessment Study (SAAS).
  - Data Acquisition and technical problem solver in Support Monitoring and Remainder Technology for Mild Dementia (SMART4MD), funded by European Union under Horizon 2020.
  - Technical head for design of a system for data acquisition in E-dent health project.
  - Data Analysis development in Model Driven Decision Arena (MDDA).

PROJECTS AND RESEARCH EXPERIENCE

**Detection of Distal Radius in the Wrist Using MRI Images** **March 2018 - Present**

- Implementing AI and Machine learning techniques for effective recognition of the distal radius in the image dataset. This work was first of its kind and found to be very effective.

**Real Time Human- Detection Using Deep Learning (Stanford & BTH)** **April 2019 – June 2019**

- Implemented an algorithm to detect pedestrians and their attentiveness in a real-time scenario.
- This project is a collaboration between Stanford University and Blekinge Institute of Technology.
- The project will be showcased at Stanford university, U.S.A on 6 June 2019.

**Scale Autonomous Machine Development: Phase – I and II, Volvo CE** **January 2017 – Present**

- I worked on line-following of the machines and established the communication between machines and the network server using a self-developed android application.
- The project was showcased at Newport, U.S.A in May 2018.

**Detection of Distal Femur and Proximal Tibia in Knee Using MRI** November 2017 - February 2018

- Successfully trained Computer Vision, and Image Processing techniques for detection of the feature within the image slices.

**Real Time Data Location Based Data Display** June 2017 - October 2017

- I worked on designing a functional application to stream data from the machines, visualized by HoloLens.

**Automatic Image Based Positioning System** February 2017 - June 2017

- Developed a new algorithm to estimate the indoor location of the machines or vehicles in a real-time scenario and improved the efficiency of an existing algorithm.

**Image Enhancement and Restoration** November 2016 – December 2016

- Designed a software to enhance and restore an image which has distorted in an imaging system with imperfect lens.

**Enhancement of Signals in Squelch System** September 2016 - October 2016

- Developed a new system by integrating a variable threshold matched filter to avoid the attenuation of the weak signals in squelch system resulting in sending the signal without any loss of information.

**Case Study – Telemetry system** June 2016 - August 2016

- Conducted a case study on telemetry system at Defence Research and Development Organization (DRDO), Hyderabad, India. Study included analysis of different sensors, reconstruction of distorted signal at the receiver end.

**Sound Source Localization** April 2016 - May 2016

- Developed a software to identify the sound source in an acoustic environment in terms of its coordinates in a three-dimensional space by using an array of microscopes and algorithms such as Least Mean Square and steepest descend algorithm.

**Fusion of Two Fingerprints** June 2015 - December 2015

- Developed a software for enrolment and authentication of a user by extracting minutiae points from one fingerprint and orientation from another fingerprint. This system increased the privacy of the fingerprints without using any keys and token.

TECHNICAL SKILLS

- MATLAB
- Python
- C
- C++
- Arduino
- Verilog and other hardware languages

CO-CURRICULAR ACTIVITES

- Student volunteer, a guidance and teaching unit for students in need of additional lectures.
- Founder and CEO of Research Project Development Wing Organization for researchers.
- Art of writing articles for technical magazines.

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