# Arunodhayan Sampathkumar

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XING arunodhayan sampathkumar

Date of Birth: 28.01.1995

## Education

Oct.2019 – Present
**(M.Sc) Automotive software engineering**, *Technische Universität Chemnitz*.
Thesis-
1. Noise augmentation strategies in bird sound classification in combination with DenseNets ResNets and transformers
   Published by: CLEF2021, Germany, 2021
2. Short-Term Visual Acuity Prediction on Real-Life Patient Data under Intravitreal Operative Medication Therapy Using Gated Recurrent Units
   Conference: IEEE-BHI-BSN 2021, Germany, 2021

Aug.2012 – May 2016
**(B.E) Instrumentation and Control Engineering**, *Anna Univeristy*, India.
Bachelor-Project
1. Assist Device For Narcoleptic People - Designed and developed prototype as an aid device for patients **Tools:** EEG electrode, PIC16F877A, Matlab
   Published by: IJIEEE, India, 2016
2. Automatic Generation of Speech (AGS) For Mute and Hearing Impaired People
   Published by: IJRASET, India, 2015

## Work Experience

october.2019 – Present
**Research Assistance**, *Techniche Universität Chemnitz*, Chemnitz, Germany.
- Real time acoustic event classification and detection
- Sound Event localization and detection
- Automated audio captioning
- A low complexity RGB-D person detection and benchmark evaluation on different hardware platforms
- A low complexity bicycle Detection and tracking using WSP,SFP and ARFP YoloV3

December.2020 – March.2021
**Internship**, *Peerox GmbH*, Dresden, Germany.
- Exploratory suitability analysis of various algorithms of feature extraction and of machine learning for the recognition of failure scenarios in the Process data of industrial processing and packaging machines from the Pilot operation of the operator assistance system MADDOX.
- Softwares and Libraries- MADDOX, MongoDB, MariaDB,Keras, Tensorflow

April.2021 –present
**WerkStudent**, *MindIntelligence*, Berlin, Germany.
- Speech Enhancement by noise removing based on time-frequency domain mask using deep learning
- Emotion Recognition and estimating DVA outputs
- Creating API and deploy in mobile applications

## Publication

Title **A realtime demo for Acoustic event classification in ambient assisted living contexts**

- Hardware used : Embedded Demo setup in Jetson Tx2

Published by: ACM, France, october, 2019

Title **CNN-based Audio Classification for Environmental Sounds, Ambient Assisted Living and Public Transport Environments using an Extensive Combined Dataset**

- Hardware used : Nvidia GTX 1050Ti, Intenta sensors

Published by: TUC Informatik, Germany, January, 2020

## Technical Skills

Strength: Audio, Image and Video Signal Processing, Machine Learning, Deep Learning

Programming Skills: **Python,Shellscript** ●●●●● C, C++, Matlab, Labview, Java,Kotlin,javascript ●●●

Development Tools: PyCharm, Pyaudio, TensorFlow,Pytorch, Nvidia GPU computing, CUDA, CuDNN, Theano, Lasagne, numpy, scipy, scikit-learn, python speech features, pydub,ROS, matplotlib,Docker,kubernetes,Heroku.

Hardware Platforms: Arduino Platforms, Raspberry Pi, Nvidia Jetson Tx2,zynq 7000, Jetson nano.

## Language

Deutsch Beginner *Goethe-Institut Chennai and TU Chemnitz B1*

English Fluent

Tamil Mother Tongue

[1]Arunodhayan Sampathkumar