

# K S Bharathwaj

in ksbharathwaj17 | ✉ ksbharathwaj17@gmail.com | 🌐 ksb1712 | 🏠 ksb1712.me

## EDUCATION

**KTH Royal Institute of Technology, Technische Universität Berlin**  
MSc IN AUTONOMOUS SYSTEMS (EIT ICT - DOUBLE DEGREE)

Europe  
Aug 2020

**National Institute of Technology Tiruchirappalli**  
BACHELOR OF TECHNOLOGY, ELECTRICAL AND ELECTRONICS ENGINEERING

Tiruchirappalli, India  
May 2018

## EXPERIENCE

**National University of Singapore** | SUMMER RESEARCH INTERN  
May 2017 - Aug 2017 | Singapore

PI: DR MICHAEL GIRARD

- DRUNET: a dilated-residual U-Net.. **OSA Publishing** 2018
- Developed CNN architecture to obtain segmentation of the Optic Nerve Head from OCT scans.
- Implemented an algorithm to identify Bruch's membrane in an ONH-OCT scan and trace it's contour throughout the entire volume file.

**Indian Institute of Technology (IIT), Delhi** | RESEARCH INTERN  
Jul 2016 - Aug 2016 | Delhi, India

MENTOR: DR. RAHUL GARG

- Improved performance of Granger causality analysis of fMRI scans of human brain.
- Parallelization of the algorithm was implemented using Nvidia's CUDA C platform.

**Delta Force (Computing Club, NIT Trichy)** | SOFTWARE DEVELOPER  
Aug 2015 - May 2018 | Tiruchirappalli, India

- Head of web operations and System administrator for NITTFEST'17.
- Developed android and web based applications for college fests.
- Organized workshop on computer vision for CURRENTS'16, '17

## PROJECTS

- Distributed multi agent coordination [RHBP, ROS, Python] - MAPC'19
- Vehicle detection and tracking across frames in real time [Keras, OpenCV] - Spring 2019
- Residual based image compression using autoencoders and entropy coding [Pytorch] - Spring 2019
- Behavioral Cloning for self driving car using Android Things [TF, Android] - Spring 2018
- LSTM based Energy forecasting for renewable energy farm [Keras] - Spring 2018

## COURSEWORK

### UNDERGRADUATE

Data Structures & Algorithms  
Control Systems  
Linear Algebra  
Pattern Recognition  
Artificial Neural Networks

### GRADUATE

Machine Intelligence I  
Robotics  
Applied AI  
Deep Learning

## PROGRAMMING

C • C++ • Java • Python  
Tensorflow • PyTorch • CUDA  
ROS • OpenCV • Matlab  
Android • PHP • AWS •  $\LaTeX$

## AWARDS

- Semifinalist - Bosch BCX Berlin (2019)
- 4<sup>th</sup> - SCDC, IIT Madras (2016)
- 2<sup>nd</sup> - GPU coding NIT Trichy(2015)
- Inspire Scholarship MHRD, Govt. of India (2014)
- 14<sup>th</sup> - National Math Olympiad (2010)