Bharat Somashekar

M.Sc. student at Uni Stuttgart

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AI Skills

GANs 1.5 yrs.

CNNs 2 yrs.

LSTMs 2 yrs.

Machine learning 2 yrs.

Pytorch, Tensorflow 2 yrs.

Software Skills

Software design 5+ Jahre

Embedded System, Micro-controllers 4+ yrs.

IoT 4+ yrs.

C++, Python, Java 4 yrs.

Biography

I am an AI student and a software engineer, I am currently pursuing my M.Sc. in Information Technology at University of Stuttgart, Germany. I have extensive industrial embedded software development experience as well as academic expertise in Artificial Intelligence, and I feel that by integrating the two domains, I can produce something truly spectacular.

AI Thesis and Fachpraktikum

Master Thesis Student — 01/2021 - today

Institut für Signalverarbeitung und Systemtheorie (ISS)
University of Stuttgart

GANs for LiDAR point cloud denoising and synthetic-to-real translation: Development of Deep learning networks to denoise the Lidar point clouds obtained from severe weather driving conditions, as well as the domain adaptation from synthetic Lidar 3D point cloud to real Lidar 3D point Cloud.

Conversational AI — 10/2020 - 03/2021

Institute for Natural Language Processing
University of Stuttgart

Engagement Tracking using Deep Neural Networks: Predict the engagement level of a person in a conversation using head pose, gaze, and facial action units of the person

Interaktive Systeme: Machine Learning for HCI — 10/2019 - 02/2020

Department of HCI and Cognitive Systems
University of Stuttgart

Spatio-temporal visual saliency prediction on GUI: A machine learning and a deep learning approach to predict where the user would focus his attention on the GUI using his mouse, keyboard activities without the need of an eye tracker.

Work experience

IoT Software Development| HiWi — 02/2021 - today

Fraunhofer-Gesellschaft | Stuttgart, Germany

Design and develpment of an IoT application that is programmed using python and interacts with raspberry pi and many other Linux devices.

Java Application Development | Working Student — 02/2019 - 07/2020

Robert Bosch GmbH | Stuttgart, Germany

Java application architecture design and development for automotive network protocols simulation and the development of the corresponding graphical user interface.

Software Developer 2 — 08/2017 - 08/2018

Infinera India Private Limited | Bangalore, India

Development and maintenance of software and platform user-land drivers using C, C++ on Linux environment. Development of infrastructure software for optical amplifiers and multiplexers

Language

English C1

German B1

Education

10/2018 - today

M.Sc in INFOTECH

University of Stuttgart | Stuttgart. Germany

Deep learning • Machine Learning • Embedded Systems • IoT

Master's thesis: „GANs for LiDAR point cloud denoising and synthetic-to-real translation".

07/2010 - 06/2014

B.E in Electronics and Communication

Visvesvaraya Technological University | India

Embedded Systems • IoT • Automotive • Real time Systems

Bachelor's thesis: „Multibot communication".

Senior Software Engineer **07/2014 - 08/2017**

Robert Bosch Engineering and Business Solutions Private Limited | Bangalore, India

Development of multimedia and black-box software for cars and trucks, major work in Telematics to provide connectivity units for European commercial vehicles. Tools: C, C++, shell scripting, QT creator Linux, Windows environment

Recent Software Projects

- Smart meeting room displays: Internet of things (IoT) based control and update of meeting room displays connected to raspberry pi clients.
- Smart study room: Artificial Intelligence Planning based IoT project that can track the people count in the room and automate the control of lighting, window blinds, heating, cooling, and the dustbin status.
- Telematics Solution in Trucks: This project is undertaken at ROBERT BOSCH India for one of the big automobile OEMs in Europe. I have developed the middleware for Smart Card and Tachograph reader. I've worked on the application development for CAN and Diagnosis.

Hackathons

- Unity Hackathon: 3rd prize. Conducted by Fachgruppe Informatik der Uni Stuttgart.
- IVS Hackathon: Best idea award. Conducted by Informatik Verbund Stuttgart der Uni Stuttgart
- ARM Symposium 2014 India: 2nd runner up prize for providing a solution for a vehicle to vehicle communication on indoor navigation robots