SOURAB BAPU SRIDHAR

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EDUCATION

M.Sc. Systems, Control and Mechatronics
Chalmers University of Technology | Gothenburg, Sweden | Sep 2019 - Present
- **Relevant Courses:** Deep Machine Learning, Computer Vision, Image Analysis, Humanoid Robotics, Sensor Fusion and Nonlinear Filtering

B.Eng. Electrical and Electronics Engineering
B N M Institute of Technology | Bengaluru, India | Jul 2011 - Jun 2015
- **Relevant Courses:** Artificial Neural Networks, Embedded Systems, Digital Signal Processing, Signal Processing

WORK EXPERIENCE

Master Thesis Student
Semcon | Gothenburg, Sweden | Jan 2021 - Present
- Master Thesis Project in Pedestrian Intent Prediction Using Deep Machine Learning **[Python, Tensorflow, PyTorch]**
- Investigated 3+ neural network architecture and designed a novel architecture to predict pedestrian intent

Project Engineer
Chalmers Formula Student Driverless (CFSD20) | Gothenburg, Sweden | Sep 2019 - Aug 2020
- Designed and tested vehicle state estimation algorithm on 4+ motion models based on Extended Kalman Filter (EKF), Unscented Kalman Filter (UKF), and Cubature Kalman Filter (CKF) using GPS-IMU integration, resulting in position error of less than 10% for CKF **[Matlab, Python]**
- Integrated low voltage system with the autonomous system by developing embedded software for 3+ modules **[C++]**
- Spearheaded the team into ZF Formula Student Driverless Challenge 2020

Senior Software Engineer
Robert Bosch GmbH (RBEI) | Bengaluru, India & Abstatt, Germany | Jul 2015 - Jun 2019
- Developed device drivers and created hardware and software tests for safety-critical redundant supply module, ensuring series production of 5+ autonomous driving level 3 compatible active safety projects worldwide **[C, Unit Testing, Agile, ALM, IBM DOORS]**
- Collaborated with 60+ stakeholders worldwide to build the first "Redundant Supply Concept" in Germany, resulting in the development of 2 new active safety products from Bosch **[Agile, ALM, IBM DOORS]**
- Optimized software variant handling, diminishing software maintenance effort by 50% for over 30+ projects worldwide **[C, ALM, IBM DOORS]**

RELEVANT PROJECTS

Object detection and tracking with multiple cameras | Nov 2020 - Dec 2020
- Formulated and implemented a handover algorithm to successfully track up to 12 objects simultaneously switch over multiple cameras with an accuracy of 97 ± 0.6% **[Python]**

Data Augmentation Using Generative Adversarial Networks | Oct 2020
- Developed a Conditional Generative Adversarial Network (cGAN) to generate training images from semantic segmented label map using image-to-image translation technique **[Python, Keras, Tensorflow]**

Road Object Detection using YOLOv4 | Jun 2020 - Sep 2020
- Detected road objects by training YOLOv4 object detection algorithm on Berkley Deep Drive Custom Dataset **[Python]**

Handwritten Digit Classification using Convolutional Neural Networks | Mar 2020
- Devised and trained a fully convolutional neural network to classify handwritten digits, achieving an accuracy of 95% on the test set **[Matlab, Python, PyTorch]**

VOLUNTEER EXPERIENCE

Education Volunteer
Robert Bosch GmbH (RBEI) | Bengaluru, India | Jul 2015 - Jun 2019
- Mentored 100+ students from class VIII to class X on career development at Government High School, Dodabelle, India
- Taught English to 40+ kids in class VI at Paranga Vidhya Kendra, Thorepalya, India
- Secured employee participation in fundraising activities

SKILLS SUMMARY

Programming Languages:
Python, Matlab, C, C++

Libraries, Frameworks:
PyTorch, Tensorflow, Keras

Deep Learning Methods:
CNNs, RNNs, LSTMs, GANs, Reinforcement Learning

Deployment Tools & Processes:
Azure, Git, Docker, Unit Testing, Agile, ALM, ASPICE, IBM DOORS

AWARDS RECEIVED

Young Achiever Award
Robert Bosch GmbH (RBEI)
2016

Best Outgoing Student
B N M Institute of Technology
2015

LANGUAGES

●●●● English

●●●● German

REFERENCES

Prashanth Kota
Head Of Engineering, Driver Assistance Platform Solutions
Robert Bosch GmbH (RBEI)
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