

# VARUN BURDE

PhD Student and researcher  
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[VarunBurde.github.io](https://VarunBurde.github.io) | [Profile website](#)

## Education

České vysoké učení technické v Praze, <b>ČVUT</b> (Czech technical university at Praha) Doctor of Philosophy, Faculty of Electrical Engineering, Department of Computer Science Topic- Leveraging neural implicit scene representation for mapping and localization	Current
České vysoké učení technické v Praze, <b>ČVUT</b> (Czech technical university at Praha) Master of Science, Cybernetics and Robotics (Robotics specialization) <a href="#">Master Thesis</a>	2020
Acropolis Technical Campus, Indore (affiliated to Rajiv Gandhi Technical University (RGTU) in Bhopal) Bachelor of Engineering (Electronics and communication) <a href="#">Bachelor Thesis</a>	2017

## Skills and Interest

- Languages: Python, C/C++, C#, MATLAB, Simulink, Embedded C, Maple, Bash
- Skills: Keras, Pytorch, TensorFlow, Machine Learning, OpenCV, Deep neural network, Image processing, Data science, ROS, Microsoft office, SAP HANA, Circuit simulation and PCB designing, Arduino, API integration, Kinematics analysis, GUI development with Tkinter, Pandas, Version control (Git, Plastics), JIRA, AutoCAD, Cuda, parallel processing
- Interests: Machine perception, Artificial intelligence, Robotics, Computer vision, Dynamics and control, Flying robots, Machine learning, Humanoid Robots, Deep Neural network, Path planning, Augmented reality, Virtual reality, 3D Reconstruction

## Industrial training

- Robotic Perception group, CIIRC Prague  
Summer job of 3 months (working with Slam algorithm, path planning, creating GUI)
- Dsk Benelli (Shiva Moto wheel Indore)  
workshop work experience of 3 weeks as General technician
- Tuff Glass Technology, Indore  
Industrial work experience of 3 weeks as junior electronic technician

## Work Experience

- Developer for Industry 4.0 at CIIRC, testbed (since October 2019 - current)

## Projects

- Remotely controlled Android based electronic notice board using GLCD (Bachelor's)
- Sound follower: Arduino based project with D.I.Y kit that follow sound (Bachelor's)
- Ps3 controller-based radio control car with precise locomotion (Bachelor's)
- X-mode quadcopter with FS-CT6 transmitter and Hobby king KK2.1.5 multi-rotor LCD flight control board with 6050MPU And Atmel 644PA(Bachelor's)
- Quadruped model using Arduino board with servo motors (Bachelor's)
- Analysis of spam filter with different classifiers. (Master's)
- An estimation of a robot's position in a maze using a hidden Markov model algorithm. (Master's)
- Collaborative robot as a caricaturist with KUKA LBR iiwa 14 (Master's)
- Key logger (SENMAN s.r.o.)
- Detection of speed of ball in tennis game with OpenCV (SENMAN s.r.o.)
- Deep neural network for city mapping using Google Street View data (Master thesis)
- Software development and testing of Montratec rail system using opcUa server (CIIRC funded by Cluster 4.0 – Methodology of System Integration)
- Vision based pick and place operation using deep learning (CIIRC, funded by Cluster 4.0 – Methodology of System Integration)
- Pixhawk based autonomous drone for painting (CIIRC, funded by Cluster 4.0 – Methodology of System Integration)
- Building and evaluating accurate 3D models from images for robotic manipulation (CIIRC, funded by RICAIP: Research and Innovation Centre on Advanced Industrial Production)

## Co-curricular activities and Awards

- Computing resources in the Karolina supercomputer for the year 2022-2023
- Led team won Porsche Student autonomous driving contest 2022
- Awarded fully funded scholarship for academic year 2017-18 by Ministry of Education, Youth and Sport of the Czech Republic
- Led college football team in 2017.
- Actively participated in robotics and sports competition and events.
- Attended activities international student club at CTU Praha.
- Played football at fourth division league at Strahovskaliga (2018)
- Training with 8<sup>th</sup> division Football league club, Czech Republic

## Hobbies

- Reading about inventions, discoveries and new development in robotics, computers, automation technologies and biotechnology.
- Love to watch and hear hypothesis for travelling future, space and about extraterrestrial life.
- Analysis of MotoGP and gaining skills.
- Strategy based video games with some fancy theme like Sci-fi, fantasy, superpowers.