Victor Vadakechirayath George

+49-17677300353 | victorvg17@gmail.com | linkedin.com/in/victorvgeorge | github.com/victorvg17

EDUCATION

- **University of Freiburg** — Germany
  Master of Science in Embedded Systems Engineering majoring in Informatics. — *Oct 2018 – Present*
  - **Subjects**: Modelling and System Identification, Numerical Optimisation and Control, Mobile Robotics, Algorithms and Data-structures, Machine Learning, Statistical Pattern Recognition, Deep Learning, Reinforcement Learning, Computer Vision

- **College of Engineering Trivandrum** — Kerala, India
  Bachelor of Engineering in Electrical and Electronics. — *Aug 2011 – April 2015*

EXPERIENCE

- **IntelligentMobiles GmbH** — Wilhemshaven, Germany
  Software Developer Intern — *Sept 2020 - Dec 2020*
  - **Computer Vision tasks**: Worked on state of art semantic segmentation techniques on images using deep learning with tensorflow Keras API. Developed a segmentation network that could return both segmented image and respective image classification in one sweep. Worked on all stages of deep learning pipeline for images from image annotation to training to deployment of optimized model on controller running on cpp stack.
  - **3D Lidar point cloud tasks**: Developed a visualizing tool for 3D point cloud data for monitoring mobile objects at the project-site. Application was written in cpp using pcl point cloud library.
  - **Languages and tools used**: Python, tf-keras, cpp, git, tmux

- **PSIORI GmbH** — Freiburg, Germany
  Student assistant, Firmware development — *May 2019 - Aug 2020*
  - **Firmware development**: Camera firmware development in C++ for Computer Vision project, development of auto exposure functionality for camera using RPROP algorithm.
  - **Languages and tools used**: cpp, python, Qt

- **Department of Sport and Sport Science, University of Freiburg** — Freiburg, Germany
  Student assistant, Android development — *Feb 2019 - Jan 2020*
  - **App development**: Further optimization of fitness tracking application to monitor exercise routine of patients under rehab. The app was deployed to more than 200 users and data was collected for further research.
  - **Languages and tools used**: Java, Android Studio

- **Tagbox Solutions** — Bangalore, India
  Embedded software developer — *Aug 2017 - Jul 2018*
  - **Firmware development**: Interfacing of peripheral sensors like accelerometer and temperature sensor to Nordic low energy bluetooth controller. Communication protocols used were SPI, I2C, UART and 1-Wire Communication
  - **Sensor data analytics**: Calibration of temperature sensors using Linear Regression techniques using temperature data over 24h, monitoring and visualization of sensor data using R and psql.
  - **Languages and tools used**: Embedded C, Keil, Eclipse IDEs, R Studio

- **Robert Bosch Engineering and Business Solutions** — Bangalore, India
  Software Engineer, Automotive Software Development — *Jul 2015 - Jul 2017*
  - **Customer Engineer**: V-Model Software development and testing of Diesel Power train modules, automation of quality monitoring checks using Perl scripting, integrated various functional modules on TriCore controller from Infineon using Embedded C before delivery to customer.

Personal projects

- **Pap smear scanner Android application**: Developed android application for diagnosing cervical cancer class from pap smear sample images. Resnet classification network used is trained on open source SiPakMed dataset using PyTorch framework and trained model is deployed on android device. Idea won the SPARK Startup Competition 2020 organized by Founders Club, Freiburg in Social Impact category.
- **Cartpole balancing using Reinforcement learning**: Classical RL control task involved balancing of a vertical cartpole upright with swing and horizontal cart movement. Algorithm used: DDPG with PyTorch deep learning framework. **GitHub**: https://github.com/victorvg17/rl-uni-project
- **Security logbook application**: Built a guest entry logbook Android application keeping track of number of visitors, visitor entry details and total visitor stats for the day. **GitHub**: https://github.com/victorvg17/Security-log-book

Technical Skills

Languages: Python(Advanced), C/C++(Advanced), Matlab(advanced), SQL(intermediate), Java(beginner), HTML/CSS(beginner), R(beginner),
Deep learning Frameworks: Tensorflow-Keras, PyTorch
Developer Tools: Git, VS Code, Jupyter Lab, tmux, Android Studio
Libraries: pandas, NumPy, Matplotlib, scikit-learn, opencv, pcl

Language Skills

German: cleared B1 Goethe Certification, able to communicate fluently in non-technical context.
English: cleared IELTS certification equivalent to C1 level
Hindi and Malayalam: native speaker