CURRICULUM VITAE

Sivasurya Santhanam

Address : Zi.310, Maximilian str. 22–24, 53111–Bonn.
Mobile : +49–17661449117
E-mail : sivasurya.santhanam@smail.inf.h-brs.de
Date of birth : 29.01.1992
Nationality : Indian
Marital status : Single

Educational details

September 2013 – Present
Hochschule Bonn-Rhein-Sieg (Germany) -
Major : Autonomous systems (Dept. of Computer science)
Degree : Master of Science (M.Sc.)

August 2009 – April 2013
Kongu engineering college (India)
Major : Mechatronics engineering
Degree : Bachelor of Engineering (B.E)

May 2008 – March 2009
AKT Academy Matriculation H.S.S (India)
Major : Computer science
Higher secondary school

Projects

October 2015 – April 2016
Master thesis – (Human robot communication)**:**
Emotion detection from German text by sentiment analysis

- Emotions are detected from the spoken text
- Feature vectors are generated using word embedding (word2vec & doc2vec) producing semantics preserving high dimensional vectors
- Project files are available at https://github.com/sivasuryas/emotion_detection

May 2014 – January 2015
Research and Development project – (Human robot communication)**:**
Automatic speech recognition evaluation system

- Generic toolkit to evaluate multiple speech recognition engines, developed in java with GUI
- Java packages are modular and extendable
- Source code and executable are available at https://github.com/sivasuryas/asrEvaluationToolkit

July 2012 – March 2013
Bachelor thesis – (Designing and production)**:**
Design and analysis of planetary cover using FMEA & QFD

- Critical problems in axle assembly section of Caterpillar trucks is analyzed using quality control tools
- New fixture model is designed using PTC Creo for the planetary assembly problem

Research interests

- Human Robot interaction – Speech recognition systems, Natural language processing
- NLP – word2vec and doc2vec learning models from Gensim, Sentiment analysis
- Machine learning – Dimensionality reduction, Distributed representation
- Mobile robotics – Localization, Navigation, Mapping

Course projects

- eDiViDe – VHDL programming in FPGA based wheeled robot to detect mines
- Computer vision – Face recognition using OpenCV tools and PCA
- Control system – Self balancing LEGO robot using PID controller

Skill sets

- Good programming knowledge in Java and Python
- Python libraries – sklearn, nltk, gensim, matplotlib, bokeh, multiprocessing
- GUI programming in Java (Swing)
- VHDL programming in FPGA
- Modelling and simulation using PTC Creo and ANSYS
- Flexible to work in Windows or Linux (Ubuntu)
- Documentation coding in LaTeX

Languages

- Tamil (fluent) – Mother tongue
- English (fluent)
- German (level B1)

Hobbies

- Playing chess
- Cooking

Bonn, Germany. (Sivasurya Santhanam)