Fábio Ferreira

Résumé

Objective

I'm a dedicated Computer Science M. Sc. student at KIT in Karlsruhe, Germany who graduated B. Sc. from University of Applied Sciences Karlsruhe as one of the top 8% graduates. Motivated by my Deep Learning bachelor thesis, I've been setting focus on Machine Learning ever since and am currently engaged with a 1–year research project at the IAR (Institute for Anthropometry and Robotics). Alongside, I'm employed as a working student software engineer at a subsidiary company of the Daimler AG.

Person

Place of birth	Calw, Germany
Citizenships	German and Portuguese
Date of birth	17th of April 1990

Education

2016–now **M. Sc.**, *Karlsruhe Institute of Technology*, Karlsruhe.
Computer Science with focus on Machine Learning

2013-2016 **B. Sc.**, *Karlsruhe University of Applied Sciences*, Karlsruhe, *GPA: 4.0, with distinction (graduated as one of the top 8% in two years)*.
Computer Science, Computer Vision

2010-2012 **State-Certified Technical Engineer**, *Gottlieb–Daimler–Schule 2 – Fachschule für Technik*, Sindelfingen, *GPA: 4.0 (graduated best in class)*.
Electrical Engineering, Computer Science

2006-2009 **IT systems engineer**, *Deutsche Telekom AG*, Stuttgart.
Information Processing

Research Project

title	**Towards Intelligent Robots – Generating Representations of Sensorimotor Experiences**
supervisors	Prof. Dr. Tamim Asfour, Dr. Eren Erdal Aksoy

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description Learning new skills from sensorimotor experiences in varying contexts and transferring knowledge to new domains is still a challenge in robotics. First, we have analyzed recent contributions in robotics towards modeling action sequences and learning from demonstrations. Now, we're currently doing research in the domain of video prediction models that create latent representations in order to work towards implementing more intelligent robots.

Bachelor Thesis

title ***Optimal CNN Architectures for Defect Classification in Images***

supervisors Prof. Dr. Norbert Link, Prof. Dr.-Ing. Laubenheimer

description The final paper addresses the use of Convolutional Neural Networks (CNN) for defect classification in the automatical optical inspection. The performance and accuracy of classification varies and both are dependent on the selection of the architecture and characteristics of the underlying dataset. The training of artificial neural networks is incorporated with time-consuming and expensive efforts. To minimize those, methods were evaluated that allow to choose an optimal architecture from a set of architectures within a reasonable amount of time.

Scholarship

2015–now **Full scholarship**, *At the German Academic Scholarship Foundation since November 2015, suggested by the university for exceptional student performance*, https://ferreirafabio.github.io/data/sdv.pdf.

Work Experience

2013–now **Working Student**, *MBtech Group GmbH & Co. KGaA*, Sindelfingen.
Software development, responsible for tools and scripts used by 30 engineers

2012–2013 **Software Developer**, *MBtech Group GmbH & Co. KGaA*, Sindelfingen.
Software development in exhaust aftertreatment for Daimler AG, using Matlab/Simulink and Daimler tools

2010–2010 **Network Administrator**, *Sparkassen-IT GmbH & Co. KG*, Calw.
Configuration of Cisco Systems network devices, Linux server administration

Other Experience

November 2015 **Speaker at the Deep Learning Student Talk**, *At the Karlsruhe University of Applied Sciences, both Prof. Link and Prof. Laubenheimer, invited me as a speaker, along with two others, to the first Deep Learning Student Talk with approximately 50 attendees. During the 60 minute presentation, I gave an introduction to the basics of Deep Learning and provided insights into my bachelor thesis results.*, https://ferreirafabio.github.io/data/posterdl.pdf.

Software Skills

Development Eclipse SDK, PyCharm, Matlab, Simulink, MS Visual Studio and TFS

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Testing	The MathWorks Polyspace, Tessy Test
Versioning	SVN, Git

Software Language Skills

Language	Level	Experience
Java	practitioner	3 years
Matlab	practitioner	3 years
C/C++	practitioner	2.5 years
SQL	experienced beginner	1 year
C#	beginner	1 year
Python	beginner	1 year

Machine Learning Skills

Frameworks	Caffe, TensorFlow, OpenCV, scikit–learn
Techniques	CNN, RNN/LSTM, GAN, Auto–encoders

Languages

German	**IRL level 5**
English	**IRL level 4**
Portuguese	**IRL level 4**
Spanish	**IRL level 1**

Interests

Reading	Besides working and studying, I use a large amount of my free time for reading books.
Sports	I play volleyball in a society and enjoy hiking in the alps and Black Forest region.
Politics	Besides my interest for national and international politics, I enjoy political discussions at the German Academic Scholarship Foundation.

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