

ULRICH SCHAECHTLE

EDUCATION

Doctor of Philosophy, Royal Holloway, University of London 2011 - 2015
Machine Learning London, UK

- Thesis title: “Dynamic Causal Discovery”
- Fully funded position
- Part of the EU project “Continuous Multi-layered and Multi-parametric Analysis of Diabetes Type 1 & 2”

Master of Science, Imperial College London 2010 - 2011
Computing (Artificial Intelligence) London, UK

- I completed the Master of Science in September, 2011. The taught courses of the MSc programme included among others the following lectures:
 - Machine Learning, Neural Computation, Intelligent Data Analysis & Probabilistic Inference, etc...

Bachelor of Science, University of Duisburg-Essen 2007 - 2010
Applied Cognitive and Media Science Duisburg, D

- Undergraduate Degree in Applied Cognitive and Media Science, Bachelor of Science, Germany, 2010. Overall grade: 1.5 -A (equivalent to BSc (Hons.))

TECHNICAL STRENGTHS

Programming	Python (proficient), Matlab (proficient), Prolog (proficient), Java (prior experience)
Databases	Prior experience with PostgreSQL, Oracle SQL and BQL (Bayesian Query Language)
Tools and Systems	Linux, Hadoop, MapReduce, Git, Bash-Script

SELECTED SOFTWARE PROJECTS

Gaussian Process Memoization 2015

- An efficient python implementation for a generalisation of Gaussian Processes is introduced that works in the context of a broad class of probabilistic programs. Its performance is illustrated in applications to Bayesian optimisation, hierarchical Gaussian Processes and symbolic reasoning over kernel structures.

Flexible Causal Discovery 2014

- A novel mechanism for discovering causal relations in noisy observational data implemented in Matlab. The mechanism is formulated with a set of functional equations providing a new interpretation of noise.

A data-driven diagnosis component for the AI layer of the COMMODITY₁₂ project 2013

- The software supports sensor-based patient management by implementing a framework for reasoning about observations over time using time series analysis and machine learning techniques for prediction in Java.

Multi-Dimensional Causal Discovery 2013

- This is an implementation of our method for learning causal relations within high-dimensional tensor data as they are typically recorded in non-experimental databases. The method allows the simultaneous inclusion of numerous dimensions within the data analysis such as samples, time and domain variables construed as tensors.

Logical Agents for Medical Advice (LAMA) 2012

- An intelligent software agent is provided with knowledge about a domain to support diagnostic reasoning.

MSc Project 2011

- I applied and developed new machine learning algorithms to time series of movement data of flies filmed by a video camera to differentiate trajectories and determine genetic differences among the flies.

PEER-REVIEWED PUBLICATIONS

- for an up-to-date list of publications please see: <http://www.schaechtle.com/Pubs.html>

EXPERIENCE

University of Duisburg-Essen 2009 - 2010
Student Research Assistant Duisburg, D

- Student assistant at the faculty of General Psychology: Cognition. My duties here included:
 - evaluate complex data from neuroscientific experiments
 - conduct experiments

University of Duisburg-Essen 2008 - 2010
Teaching Assistant Duisburg, D

- Teaching assistant for the lecture courses Inferential Statistics and Descriptive Statistics. I was responsible for approximately 60 younger undergraduate students to communicate complex formulae, explain software create teaching materials.

Military service 2005 - 2007
Soldier Europe

- The tough training of a German infantry soldier and combat engineer taught me about:
 - strong team working because I have been with my group 24 hours a day, over several weeks without a break

Qualspec Asia Ltd, Hong Kong 2005
Trainee Hong Kong, China

- Manufacturing audits for Western clients across Southern China.

INTERESTS AND ACHIEVEMENTS

Winner of the Royal Holloway Travel Award 2015

- awarded £2000 towards my trip to MIT (plus additional grants from MIT and Royal Holloway)

Student body representation for the subject "Applied Cognitive and Media Science" 2009 - 2010
Elected President Duisburg, D

- Elected for an entire academic year, commitment in the representation for three years.
- Representing more than 600 students.