Martin Schrimpf

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Education

10/2014 - 10/2016	**Elite Master's Program Software Engineering**, *TU Munich, LMU Munich and University of Augsburg* , ∅1.1 *w/ honors* Elite Graduate Program for a small group of students with a focus on the areas Formal Methods, Project Management, Distributed Systems, Databases, Human Computer Interaction and soft-skills. **Master's Thesis** at *Harvard University* on the role of brain-inspired recurrent neural algorithms for advanced object recognition. Technologies: Java, C++, SQL, QVTO, Maude, CTL, LTL
10/2011 - 07/2014	**Bachelor's Program Information Systems**, *TU Munich,* ∅1.4 Combination of economic fundamentals and computer science with a focus on Information Systems. **Bachelor's Thesis** at the *University of Sydney*: Investigation of hardware transactional memory and its effectiveness as a synchronization technique for databases, graded 1.0. **Study Abroad** at the *Auckland University of Technology*: Courses in Artificial Intelligence and Management. Project on a novel landmark-based approach to perceptual mapping (SLAM) at CAIR Technologies: Java, UML, SQL, C++, C, Assembly, ARIA
2003 - 2011	**Abitur**, *Gymnasium Dorfen* Focus on Mathematics, Computer Science, Economics, English. **USA-exchange** with the *C.D. Hylton High school* in Virginia

All grades in the German scale (1.0 excellent - 5.0 fail)

Experience

04/2016 - 11/2016	**Research Assistant**, *Kreiman Lab, Harvard Medical School* Research at the bridge of machine learning, neuroscience and psychology with a focus on the role of recurrent connections. We improved object detection performance on occluded objects from 45% with Alexnet to 74% with our models and offered a first possible application of recurrency in the human brain. We are also investigating the robustness of neural networks and the role of scene context for object detection Technologies: Matlab, Python, keras, Theano, Linux, ECoG

12/2015 - 04/2016	**Research Assistant**, *Oracle Labs* Developed an on-demand database module for the computing cluster that is now used by internal research teams Technologies: Linux, LSF, Virtual Machines
07/2015 - 10/2015	**Software Engineering Intern**, *Siemens AG* Architectural concept and implementation of a behavior-driven testing framework that can run a test specification written in natural language and that is now used in three major business areas Technologies: Python
07/2012 - 12/2015	**Freelancer**, *Martin Schrimpf Software Solutions* Software Development and Services - projects include: *Greimel IT-Systemhaus GmbH* Led the development of a Document Management System including optical character recognition (OCR), a financial accounting interface and a dynamic workflow management system *R-Backup Datensicherung GmbH* Developed a multilingual website's front- and backend to administrate partners and customers and to issue invoices *Promonde JLT* Developed an advertisement website for Arabic countries with over 10k users per day Technologies: Java, JavaScript, PHP

Publications

2016	H. Tang*, B. Lotter*, M. Schrimpf*, A. Paredes, J. O. Caro, W. Hardesty, D. Cox, and G. Kreiman, "Recurrent computations for pattern completion", *submitted to Nature Neuroscience*,
2016	M. Schrimpf, "Should i use tensorflow", *submitted*,
2014	M. Schrimpf, "Scalable database concurrency control using transactional memory", Bachelor's Thesis, Technical University Munich

Presentations

2016	*Brains & Bits, NIPS Workshops* Recurrent computations for pattern completion
2016	*Systems Club, Harvard Medical School* Recurrent computations for pattern completion

Awards

2016	**FITweltweit**, *DAAD German Academic Exchange Service*
2016	**Teilstipendium**, *University Augsburg*
2016	**Integrationspreis**, *Government of Swabia*
2016	**Winner Social Society**, *Idea- and Startup-competition Generation-D*

2015	**Deutschlandstipendium**, *Federal Ministry for Education and Research, Roland und Ute Lacher Fonds*
2014	**Ministeriumsstipendium**, *Bavarian State Ministry for Education, Science and the Arts*
2013 - 2016	**e-fellows.net scholarship**

Extracurricular Activities

02/2016	**Artificial Intelligence Workshop** Organized a two-day workshop on Neural Networks, Machine Learning and Organic Computing. The speakers were Prof. Günther Palm, PD Rolf Würtz and Dr. Joschka Bödecker
Since 08/2015	**Co-Founder and Technical Lead**, *Integreat* Platform to deliver information from local authorities and helper organizations to refugees in over 80 German cities. Implementation of the administration backend and a cross-platform app, later coordination of the development community Technologies: Xamarin (C#), Android (Java), WordPress (PHP)
2015 - 2016	**MINGA Mentor for International Students**, *TU Munich*
Since 10/2013	**Rotaract Club München Residenz** Youth club of Rotary, based on the community, helping and learning. Social initiatives, e.g. with our orphanage sponsorship

Mentored Students

Fall 2016	**Jacklyn Sarette**, *Emmanuel College* Behavioral experiments on visual context
Fall 2016	**Doré de Morsier**, *ETH Zurich* Behavioral experiments on the recognition of novel objects
Summer 2016	**Wendy Fernandez**, *City University of New York* Behavioral experiments and data analysis on the identification of occluded objects (MIT Summer Research Program)

References

Prof. Gabriel Kreiman, PhD, *Children's Hospital Boston, Harvard Medical School*
Prof. Dr. Alexander Knapp, *Software and Systems Engineering, Augsburg University*