

Martin Schrimpf

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Education

10/2014 - 02/2017	Elite Master's Program Software Engineering, <i>TU & LMU Munich & University of Augsburg, GPA 4.0 w/ honors</i> 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 <i>Harvard University</i> on the role of brain-inspired recurrent neural algorithms for advanced object recognition. <u>Technologies:</u> Java, C++, SQL, QVTO, Maude, CTL, LTL
10/2011 - 07/2014	Bachelor's Program Information Systems, TU Munich, GPA 3.8 Combination of economic fundamentals and computer science with a focus on Information Systems. Bachelor's Thesis at the <i>University of Sydney</i> : Investigation of hardware transactional memory and its effectiveness as a synchronization technique for databases, graded A+. Study Abroad at the <i>Auckland University of Technology</i> : Courses in Artificial Intelligence and Management. Project on a novel landmark-based approach to perceptual mapping (SLAM) at CAIR <u>Technologies:</u> Java, UML, SQL, C++, C, Assembly, ARIA
2003 - 2011	Abitur, Gymnasium Dorfen, GPA 3.7 Focus on Mathematics, Computer Science, Economics, English. USA-exchange with the <i>C.D. Hylton High school</i> in Virginia All grades converted into the American 4-point system

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 <u>Technologies:</u> Matlab, Python, keras, Theano, Linux, ECoG
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12/2015 - 04/2016	Research Assistant, Oracle Labs Enabled research teams to flexibly utilize the Oracle RDBMS on the internal cluster by developing an on-demand database module <u>Technologies:</u> Linux, LSF, Virtual Machines
07/2015 - 10/2015	Software Engineering Intern, Siemens AG Architectural concept and development 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 <u>Technologies:</u> Python
07/2012 - 12/2015	Freelancer, Martin Schrimpf Software Solutions Software Development and Services - projects include: <i>Greimel IT-Systemhaus GmbH</i> Led the development of a Document Management System including optical character recognition (OCR), a financial accounting interface and a dynamic workflow management system which made the client company effectively paper-free <i>R-Backup Datensicherung GmbH</i> Developed a multilingual website's front- and backend to administrate partners and customers and to issue invoices <i>Promonde JLT</i> Implemented an advertisement website for Arabic countries with over 10k users per day <u>Technologies:</u> 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", <i>Under review</i> ,
2016	M. Schrimpf, <i>Should i use tensorflow</i> , Seminar Paper, University of Augsburg. arXiv: 1611.08903 [cs.AI]
2014	M. Schrimpf, "Scalable database concurrency control using transactional memory", Bachelor's Thesis, Technical University Munich

Presentations

11/2016	<i>Brains & Bits, NIPS Workshops</i> Recurrent computations for pattern completion
10/2016	<i>Systems Club, Harvard Medical School</i> 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 , <i>Integreat</i> 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 <u>Technologies</u> : Xamarin (C#), Android (Java), WordPress (PHP)
2015 - 2016	MINGA Mentor for International Students , <i>TU Munich</i>
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 , <i>Emmanuel College</i> Behavioral experiments on visual context
Fall 2016	Doré de Morsier , <i>ETH Zurich</i> Behavioral experiments on the recognition of novel objects
Summer 2016	Wendy Fernandez , <i>City University of New York</i> 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. Helmut Krcmar, *Computer science in economics, Technical University Munich*
Prof. Dr. Alexander Knapp, *Software and Systems Engineering, Augsburg University*