

Martin Schrimpf

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Education

Since 2017	Massachusetts Institute of Technology (MIT) , <i>PhD program</i> Department of Brain and Cognitive Sciences. Advisor: James DiCarlo.
2014 - 2017	TU & LMU Munich & University of Augsburg , <i>Master of Science</i> Elite Program Software Engineering. GPA 4.0 w/ honors. Thesis completed at Harvard University .
2011 - 2014	TU Munich , <i>Bachelor of Science</i> Program Information Systems. Thesis completed at the University of Sydney .

Research and Industry Experience

2017	Salesforce Einstein AI , <i>Deep Learning Intern</i> Advisor: Richard Socher. Flexible architecture search for natural language processing with reinforcement learning and predictive function.
2016	Harvard Medical School , <i>Research Assistant</i> Advisor: Gabriel Kreiman. Recurrent computations for the recognition of occluded objects in humans and models; Robustness of neural networks to weight perturbations; Role of context for object recognition.
2015 - 2016	Oracle Labs , <i>Research Assistant</i> Development of an on-demand cluster database module.
Since 2015	Integreat Digital Factory , <i>Co-Founder / Technical Advisor (since 2017)</i> Digitization projects in social sector. Platform for local information distribution to refugees in dozen of German cities.
2012 - 2015	Martin Schrimpf Software Solutions , <i>Freelancer</i> Led the development of a document management system with optical character recognition to make the client company paper-free.
2015	Siemens AG , <i>Software Engineering Intern</i> Behavior-driven testing framework to run a test specification written in natural language.

Publications

- 2019 Kubilius*, J., Schrimpf*, M., Nayebi, A., Bear, D., Yamins, D. L. K. & DiCarlo, J. J. Brain-Like Object Recognition with High-Performing Shallow Recurrent ANNs. *Neural Information Processing Systems (NeurIPS; oral)*
- 2018 Bashivan, P., Schrimpf, M., Ajemian, R., Rish, I., Riemer, M. & Tu, Y. Continual Learning with Self-Organizing Maps. *Neural Information Processing Systems (NeurIPS) Continual Learning Workshop*
- 2018 Arend, L., Han, Y., Schrimpf, M., Bashivan, P., Kar, K., Poggio, T., DiCarlo, J. J. & Boix, X. Single units in a deep neural network functionally correspond with neurons in the brain: preliminary results. *CBMM Memo*
- 2018 Schrimpf*, M., Kubilius*, J., Hong, H., Majaj, N. J., Rajalingham, R., Issa, E. B., Kar, K., Bashivan, P., Prescott-Roy, J., Schmidt, K., Yamins, D. L. K. & DiCarlo, J. J. Brain-Score: Which Artificial Neural Network for Object Recognition is most Brain-Like? *bioRxiv* (covered by *Science*)
- 2018 Schrimpf*, M., Merity*, S. & Socher, R. A Flexible Approach to Automated RNN Architecture Generation. *International Conference on Learning Representations (ICLR) Workshops*
- 2018 Tang*, H., Schrimpf*, M., Lotter*, W., Moerman, C., Paredes, A., Ortega Caro, J., Hardesty, W., Cox, D. & Kreiman, G. Recurrent computations for visual pattern completion. *Proceedings of the National Academy of Sciences (PNAS)*
- 2017 Cheney*, N., Schrimpf*, M. & Kreiman, G. On the Robustness of Convolutional Neural Networks to Internal Architecture and Weight Perturbations. *CBMM Memo*
- 2016 Schrimpf, M., Tang, H., Lotter, W., Paredes, A., Ortega Caro, J., Hardesty, W., Cox, D. & Kreiman, G. Recurrent computations for pattern completion. *Neural Information Processing Systems (NIPS) Brains and Bits Workshop*

Presentations

- 2019 **MIT BCS Cog Lunch**
Brain-Like Object Recognition with High-Performing Shallow Recurrent ANNs
- 2019 **IBM AI Week**
Towards a synthetic, photorealistic replacement of ImageNet
- 2019 **Center for Brain-Inspired Computing (C-BRIC)**
Brain-Score: Which Artificial Neural Network for Object Recognition is most Brain-Like?
- 2019 **Computational and Systems Neuroscience (Cosyne)**
Using Brain-Score to Evaluate and Build Neural Networks for Brain-Like Object Recognition

2019	Center for Brains, Minds and Machines (CBMM) Transforming machine learning models into brain models
2018	Cognitive Computational Neuroscience (CCN) Brain-Score: Which Artificial Neural Network Best Emulates the Brain's Neural Network?
2018	Tenenbaum Lab, MIT A Flexible Approach to Automated RNN Architecture Generation
2016	Brains & Bits, NIPS Workshops Recurrent computations for pattern completion
2016	Systems Club, Harvard Medical School Recurrent computations for pattern completion

Awards

2019	MIT, Shoemaker Fellowship [tuition and stipend]
2019	Patrick J. McGovern, Travel award
2018	Google.org, Impact Challenge (Integreat) [finalist, 250,000€]
2017	MIT, Singleton Fellowship [tuition and stipend]
2017	Council of Europe, European Youth Award (Integreat) [winner]
2016	DAAD German Academic Exchange Service, FITweltweit [scholarship for research abroad]
2016	University of Augsburg, Teilstipendium [scholarship]
2016	Government of Swabia, Integrationspreis (Integreat) [competition winner]
2015	Federal Ministry for Education and Research, Roland und Ute Lacher Fonds, Deutschlandstipendium [scholarship]
2014	Bavarian State Ministry, Ministeriumsstipendium [scholarship]

Teaching

2019	Computational Cognitive Science (Prof. Tenenbaum) Teaching Assistant
2019	Harvard-MIT Computational Neuroscience Journal Club Deep Networks and PyTorch
2019	Neural Mechanisms of Cognitive Computation (Prof. Halassa) Graduate course, Teaching Assistant
2017	MIT BCS Peer Lectures Introduction to Deep Learning

Service

2019	NeurIPS Real Neurons & Hidden Units Workshop, Reviewer
2018	CBMM (MIT & Harvard), Trainee Leadership Council
2016	University of Augsburg, Organization of AI Workshop
2015 - 2016	TU Munich, MINGA Mentor for International Students