

YUTING WANG

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EDUCATION

Rutgers University

Ph.D. Student, Department of Computer Science

• Overall GPA: A.

• Advisor: Professor [Vladimir Pavlovic](#).

• Research Interests: Computer Vision, Natural Language Processing, Machine Learning, Deep Learning.

Piscataway, NJ, USA

August 2017 – Present

Carnegie Mellon University

Exchange M.S., Language Technologies Institute, School of Computer Science

• InterACT Program: Exchange program between KIT and CMU for Master's thesis project (**Top 1%**).

Pittsburgh, PA, USA

August 2016 – March 2017

Karlsruhe Institute of Technology

M.S., Department of Computer Science

• Advisors: Professor [Alexander Waibel](#) at KIT/CMU, Professor [Florian Metze](#) at CMU.

• Thesis: Highway Neural Networks for Speech Recognition.

Karlsruhe, Germany

October 2014 – August 2017

University of Duisburg-Essen

B.S., *summa cum laude*, Department of Electrical and Electronic Engineering

• Advisor: Professor [Klaus Solbach](#).

• Thesis: LO Signal Generation Circuit for Power Amplitude in a 7 Tesla MRI System.

Duisburg, Germany

October 2010 – July 2014

WORK EXPERIENCE

Samsung Research AI Center (SRUK)

Assistant Engineer Intern

• Mentors: [Maja Pantic](#) and [Vladimir Pavlovic](#)

Cambridge, UK

January 2019 – July 2019

RESEARCH EXPERIENCE

Rutgers University

Sequence Analysis and Modeling Lab

Piscataway, USA

August 2017 – Present

Bayes-Factor-VAE: Hierarchical Bayesian Deep Auto-Encoder Models for Factor Disentanglement

- Proposed a family of novel hierarchical Bayesian deep auto-encoder models capable of identifying disentangled factors of variability in data by partitioning and treating in a different manner the latent dimensions corresponding to relevant factors and nuisances.
- Outperformed existing methods both quantitatively and qualitatively in terms of latent disentanglement across several challenging benchmark tasks

Relevance Factor VAE: Learning and Identifying Disentangled Factors

- Proposed a VAE-based deep model that can learn disentangled latent representations in a fully unsupervised manner, endowed with the ability to identify all meaningful source of variation and their cardinality.
- Using a suite of disentanglement metrics, including a newly proposed one, as well as qualitative evidence, demonstrated that our model outperforms existing methods across several challenging benchmark datasets.

End-to-End Learning for 3D Facial Animation from Speech

- Developed a deep learning framework for real-time, speech-driven 3D facial animation, which learned a representation of the speech context and the emotional states of speakers from audio signals.
- Effectively estimated the form of lip movements by using the emotional intensity of speakers on the RAVDESS and VIDTIMIT audiovisual corpora.

Generative Adversarial Talking Head: Bringing Portraits to Life with a Weakly Supervised Neural Network

- Proposed a novel weakly-supervised, data-driven deep generative neural network that enabled fully automatic facial expression synthesis of a portrait using continuous action unit coefficients.
- Achieved state-of-the-art performance on the RAVDESS, VIDTIMIT, CelebA, and LFW datasets and showed the ability of generating realistic, expressive facial animation from an arbitrary source portrait.

A Hybrid Generative Adversarial Model for Collaborative Filtering

- Applied deep generative learning methods with side information for collaborative filtering.
- Outperformed state-of-the-art techniques by using adversarial learning methods adding context information to the items on MovieLens 20M dataset.

End-to-end Learning from Sketch to Facial Expression

- Introduced a framework to generate emotional face photos from their neutral face sketches based on generative adversarial networks.

- Generated realistic emotional face photos on the FERET and AR face datasets.

PUBLICATIONS

- Minyoung Kim, **Yuting Wang**, Pritish Sahu, Vladimir Pavlovic, “Bayes-Factor-VAE: Hierarchical Bayesian Deep Auto-Encoder Models for Factor Disentanglement”, in *Proceedings of the International Conference on Computer Vision (ICCV)(oral)*, 2019.
- Minyoung Kim, **Yuting Wang**, Pritish Sahu, Vladimir Pavlovic, “Relevance Factor VAE: Learning and Identifying Disentangled Factors”, in arXiv preprint arXiv: 1902.01568, 2019.
- Hai X. Pham, **Yuting Wang**, Vladimir Pavlovic, “End-to-End Learning for 3D Facial Animation from Speech”, in *Proceedings of the 20th ACM International Conference on Multimodal Interaction (ICMI)*, 2018.
- Hai X. Pham, **Yuting Wang**, Vladimir Pavlovic, “Generative Adversarial Talking Head: Bringing Portraits to Life with a Weakly Supervised Neural Network”, in arXiv preprint arXiv: 1803.07716, 2018.

HONORS AND AWARDS

- InterACT-Scholarship, Karlsruhe Institute of Technology, 2016.
- VDI Ruhrbezirksverein-Scholarship, University of Duisburg-Essen, 2013.
- VDI Ruhrbezirksverein-Scholarship, University of Duisburg-Essen, 2012.
- UDE-Scholarship, University of Duisburg-Essen, 2011.

TECHNICAL SKILLS

- Programming: Python, C/C++, Tcl, R, Java, Matlab.
- OS/Platform: Windows, Linux, Mac OS.
- Deep Learning Tools: TensorFlow, Theano, Keras, PyTorch, Caffe, Detl.

PROFESSIONAL SERVICE

Conference External Reviewer

- FG, AAAI, AISTATS, ICLR, CVPR, KDD, ICML, ICPR, NIPS, ICCV.

Teaching Assistant

- Introduction to Discrete Structures I (CS-205), Rutgers University, Instructor: Antonio Miranda, Fall 2017.
- Introduction to Discrete Structures II (CS-206), Rutgers University, Instructor: Eliane Traldi, Spring 2018.
- Data Structure (CS-112), Rutgers University, Instructor: Kevin Mc Inerney, Summer 2018.
- Introduction to Discrete Structures I (CS-205), Rutgers University, Instructor: Wes Cowan, Fall 2018.
- Introduction to Artificial Intelligence (CS-440), Rutgers University, Instructor: Abdeslam Boularias, Fall 2019.