HASSAN HAMAD

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PROFILE

- Machine Learning PhD candidate at USC
- Interested in problems related to training deep learning algorithms on a computational and data budget
- My methods are applied to various tasks such as computer vision and NLP
- Lately focused on NLP problems such as Named Entity Recognition and Relation Extraction

EDUCATION

2019/08–present **PhD in Electrical and Computer Engineering**
University of Southern California (USC) Los Angeles, CA
- Focus on efficient training of Deep learning models, especially on NLP Tasks
- Cumulative GPA: 4.0/4.0

2016/09–2019/05 **M.S. in Communications Engineering**
Technical University of Munich (TUM) Munich, Germany
- Focus on Information Theory and Wireless Communications
- Cumulative GPA: 3.9/4.0

2012/09–2016/06 **B.E. in Computer and Communications Engineering**
Notre Dame University - Louaize Zouk Mosbeh, Lebanon
- Focus on Algorithms, Digital Coding and Wireless Communications
- Cumulative GPA: 3.9/4.0

WORK

2019/02–2019/06 **Working Student - Machine Learning**
Fraunhofer Munich, Germany
- Developed and trained RNN architectures for predicting latency of a V2V communication link from channel measurements.

2017/05–2018/05 **Working Student - LTE physical layer system engineer**
Intel Munich, Germany
- Worked on a physical layer concept to implement the V2X feature from 3GPP.

2015/05–2015/08 **Intern - 3GPP Mobile Standards**
Ericsson Beirut, Lebanon
- Performed a detailed study of the different 3GPP mobile standards and the different software tools used by Ericsson for network monitoring.

TEACHING EXPERIENCE

2018/10–2019/02 **Lab Assistant for Communications Lab**
Technical University of Munich (TUM) Munich, Germany
- Introduction to communication systems based on experiments and computer simulations.

IT Skills

Python	
C++	
PyTorch	
Tensorflow	
MATLAB	
Linux	
Git	
AWS	
Docker	
Latex	

Academic Achievements

2019/08–2020/08 Annenberg Fellowship recipient
University of Southern California (USC) Los Angeles, CA

2020/08–present SLK America Fellowship recipient
V-Labs (in partnership with SLK Software) Los Angeles, CA

Publications In Preparation

- **H. Hamad**, A. Kumar, and K.M. Chugg. FIRE: A FInancial Relation Extraction Dataset *To be submitted in Spring 2023.*
- **H. Hamad**, A. Kumar, and K.M. Chugg. Training Convolutional Neural Networks using Logarithmic Number System *To be submitted in Spring 2023.*
- **H. Hamad**, A. Kumar, and K.M. Chugg. A combined SSL-ACL appraoch to train Relation Extraction Models on a Low Data Budget *To be submitted in Spring 2023.*

Past Publications

- W. Chang, **H. Hamad** and K.M. Chugg. Approximation Capabilities of Neural Networks using Morphological Perceptrons and Generalizations In *2022 Asilomar Conference on Signals, Systems, and Computers.*
- M. Kobayashi, **H. Hamad**, G. Kramer and G. Caire. Joint State Sensing and Communication over Memoryless Multiple Access Channels In *2019 IEEE International Symposium on Information Theory (ISIT).*
- **H. Hamad** and G. M. Kraidy. Performance Analysis of Convolutional Codes over the Bernoulli-Gaussian Impulsive Noise Channel In *2017 15th Canadian Workshop on Information Theory (CWIT).*
- W. Hamad, M. Bou Sanayeh, **H. Hamad**, M. Hamad, S. Georges, and W. Hofmann. Small-signal analysis of ultra-high-speed 30 GHz VCSELs using an advanced multimode approach In *2017 Proceedings of the Integrated Optics: Physics and Simulations III conference.*

Languages

Arabic (native) English (fluent) German (basic)