HASSAN HAMAD

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PROFILE

- » Machine Learning PhD candidate at USC
- » Interested in NLP and especially information extraction!
- » My PhD Thesis is centered around techniques for efficient training of neural networks.

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 EXPERIENCE

📅 2023/05–2023/08 **Quantitative Machine Learning Intern**
Bloomberg 📍 New York, USA
- » Leveraged state-of-the-art LLMs for information extraction tasks, encompassing data cleaning, preparation and augmentation.

📅 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
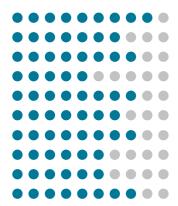- » Worked on a physical layer concept to implement the V2X feature from 3GPP.

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.

SOFTWARE SKILLS

Skill	Level
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

» FIRE: A Dataset for FInancial Relation Extraction
   👤 **H. Hamad**, A. Thakur, S. Pulikodan, N. Kolleri and K.M. Chugg.
   🏛 Under Review at the *2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics **(NAACL)**.*

» Training Convolutional Neural Networks using the Logarithmic Number System (LNS)
   👤 **H. Hamad** and K.M. Chugg.
   🏛 To be submitted to the *2024 Forty-first International Conference on Machine Learning **(ICML)**.*

» A combined SSL-ACL approach to train Relation Extraction Models on a Low Data Budget
   👤 **H. Hamad**, A. Thakur, S. Pulikodan, N. Kolleri and K.M. Chugg.
   🏛 Under Preparation.

PAST PUBLICATIONS

» Approximation Capabilities of Neural Networks using Morphological Perceptrons and Generalizations
   👤 W. Chang, **H. Hamad** and K.M. Chugg.
   🏛 In *2022 Asilomar Conference on Signals, Systems, and Computers.*

» Joint State Sensing and Communication over Memoryless Multiple Access Channels
   👤 M. Kobayashi, **H. Hamad**, G. Kramer and G. Caire.
   🏛 In *2019 IEEE International Symposium on Information Theory (ISIT).*

» Performance Analysis of Convolutional Codes over the Bernoulli-Gaussian Impulsive Noise Channel
   👤 **H. Hamad** and G. M. Kraidy.
   🏛 In *2017 15th Canadian Workshop on Information Theory (CWIT).*

» Small-signal analysis of ultra-high-speed 30 GHz VCSELs using an advanced multi-mode approach
   👤 W. Hamad, M. Bou Sanayeh, **H. Hamad**, M. Hamad, S. Georges, and W. Hofmann.
   🏛 In *2017 Proceedings of the Integrated Optics: Physics and Simulations III conference.*

LANGUAGES

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