Fahim Dalvi

✉ dalvifahim@gmail.com   🅂 fahim.dalvi

📞 +974 33647252   🅶 fdalvi

Education

Stanford University   2016
Masters of Science in Computer Science
Artificial Intelligence and Machine Learning
G.P.A. 4.0

Carnegie Mellon University   2014
Bachelors of Science in Computer Science
Minor in Mathematics
G.P.A. 3.97 (University Honors)

Experience

● **Qatar Computing Research Institute**
Software Engineer   July 2016 - Present
Developing technologies and researching deep learning techniques for the Arabic Language Technologies team
Research Intern   Summer 2013
Created a robust backend and platform enabling multilingual voice and text based meetings

● **Problemia**
Co-founder   March 2015 - March 2016
Technical lead for designing and developing an educational platform for teachers. Managed a team of four and defined the technical direction of the platform

● **Williams F1**
3D Content Creator   Summer 2012
Created interactive 3D content for a driving simulator tuned for Qatar's driving

● **Robotics Institute, Carnegie Mellon**
Research Intern   Summer 2012
Designed and Implemented a user interface to analyze results from the AirBoats project, a distributed data collection system

● **Carnegie Mellon University**
Research Intern
Wireless Networks   2012 - 2014
Created testbed for a cost effective solution to help lost people get back to their groups
Computer Security   Summer 2011
Developed malware for Mozilla Firefox in order to better understand and improve its security
UI Design   Fall 2010
Designed and Implemented new touch features for a public kiosk interface tuned for Arab Users

Projects

Video News Bot   Fall 2017
Developed a bot that summarizes a news story into a video with relevant visuals and voice-overs.

Live Speech Translation   2017
Designed and developed a live Arabic to English transcription and translation demo with a robust backend enabling live broadcastable sessions

Machine Translation API   Fall 2016
Developed a distributed backend to manage multiple machine translation engine's built at QCRI and a simple to use user-facing REST API. Served over 400K requests from 30+ countries so far!

ASL2Speech   Fall 2015
Developed a pattern mining approach to translation sign language into speech using on-body sensors

Violet   Spring 2015
Implemented machine learning and computer vision algorithms to pick the best image from a set of similar pictures

RTSift   Fall 2014
Created a deep learning based approach to learning concise representations for review threads for downstream tasks like sentiment analysis

PhdWriter   Fall 2013
Designed and developed a collaborative research tool based on web technologies with real-time collaboration to facilitate better research

Code2gether   Fall 2013
Developed a web application with real-time multi-party editing and compilation to promote a collaborative coding environment

Skills   (Experience in years)

Programming (9+)   Deep Learning (3+)   Unix (7+)
Machine Learning (4+)   Web Applications (5+)
Computer Vision (3+) Backend Development (5+)
3D Content Creation (5+)   Computer Security (1+)
Scripting (5+)   Mentoring (6+)
Languages: Python, JAVA, JavaScript, Lua
Frameworks: Keras, Torch, NodeJS, React

Research

- Dalvi, F., Durrani, N., Sajjad, H., Belinkov, Y., & Vogel, S. (2017). Understanding and Improving Morphological Learning in the Neural Machine Translation Decoder. In *Proceedings of the Eighth International Joint Conference on Natural Language Processing (Volume 1: Long Papers)* (Vol. 1, pp. 142-151).
- Belinkov, Y., Màrquez, L., Sajjad, H., Durrani, N., Dalvi, F., & Glass, J. (2017). Evaluating Layers of Representation in Neural Machine Translation on Part-of-Speech and Semantic Tagging Tasks. In *Proceedings of the Eighth International Joint Conference on Natural Language Processing (Volume 1: Long Papers)* (Vol. 1, pp. 1-10).
- Sajjad, H., Durrani, N., Dalvi, F., Belinkov, Y., & Vogel, S. (2017). Neural Machine Translation Training in a Multi-Domain Scenario. In *Proceedings of the 14th International Workshop on Spoken Language Translation.*
- Sajjad, H., Dalvi, F., Durrani, N., Abdelali, A., Belinkov, Y., & Vogel, S. (2017). Challenging Language-Dependent Segmentation for Arabic: An Application to Machine Translation and Part-of-Speech Tagging. In *Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)* (Vol. 2, pp. 601-607).
- Belinkov, Y., Durrani, N., Dalvi, F., Sajjad, H., & Glass, J. (2017). What do Neural Machine Translation Models Learn about Morphology?. In *Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)* (Vol. 1, pp. 861-872).
- Dalvi, F., Zhang, Y., Khurana, S., Durrani, N., Sajjad, H., Abdelali, A., ... & Vogel, S. (2017). QCRI Live Speech Translation System. *EACL 2017*, 61.
- Eldesouki, M., Dalvi, F., Sajjad, H., & Darwish, K. (2016). QCRI@ DSL 2016: Spoken Arabic Dialect Identification Using Textual. *VarDial 3*, 221.
- Durrani, N., Dalvi, F., Sajjad, H., & Vogel, S. (2016). QCRI's Machine Translation Systems for IWSLT'16. In *Proceedings of the 13th International Workshop on Spoken Language Translation.*

Teaching

Deep Learning for NLP
University of Duisberg-Essen, Germany
Co-lecturer   April 2018

Deep Learning for Machine Translation
DGfS - Computational Linguistics, Germany
Co-lecturer   September 2017

Computer Systems
Carnegie Mellon University, Qatar
Teaching Assistant   Fall 2013

Embedded Systems
Carnegie Mellon University, Qatar
Teaching Assistant   Fall 2013

Accomplishments

Best Audience Experience, BBC NewsHack '17
Best Arabic machine translation system, IWSLT '16
Best MYO hack at Hack Overflow, Stanford '15
Hamad Bin Khalifa University President's Award '14
Outstanding Academic Achievement, CMU '14
Senior Student Leadership Award, CMU '14
1st Place, Oman Collegiate Programming Comp. '12

Links

LinkedIn   Google Scholar   GitHub   Website