Abdelrhman (Abdul) Saleh

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EDUCATION

Harvard University   Cambridge, MA
A.B. in Computer Science and Statistics. GPA 3.8 / 4.0   May 2020
Thesis: Towards Social and Interpretable Neural Dialog Systems
Relevant Coursework: Machine Learning, Reinforcement Learning, Dimensionality Reduction, Statistical Inference, Applied Linear Algebra, Data Structures and Algorithms, Abstraction and Design in Computation.
Awards: Derek Bok Distinction in Teaching Award 2017, PRISE Fellowship 2019

TECHNICAL SKILLS

Fluent in: Python (PyTorch, TensorFlow, scikit-learn, H2O)
Familiar with: R, C++, SQL, OCaml

EXPERIENCE

MIT Media Lab   Cambridge, MA
Undergraduate Researcher, Affective Computing Group   May – Sept 2019
- Researched reinforcement learning methods for natural language processing.
- Implemented social dialog systems that can better communicate and respond to emotions.
- Proposed a novel reinforcement learning approach for training open-domain dialog systems.

MIT Computer Science and Artificial Intelligence Lab   Cambridge, MA
Undergraduate Researcher, Spoken Language Systems Group   June 2018 – Feb 2019
- Researched novel neural methods for transfer learning and natural language processing.
- Developed neural models in TensorFlow to detect political bias in news articles.
- Implemented algorithms for learning high-quality document embeddings through summarization.

SELECTED PUBLICATIONS

A. Saleh, T. Deutsch, S. Casper, Y. Belinkov, S. Shieber
Probing Neural Dialog Models for Conversational Understanding
Second ACL Workshop on NLP for Conversational AI (NLP4ConvAI 2020).

A. Saleh[*], N. Jaques[*], A. Ghandeharioun, J. H. Shen, R. Picard
Hierarchical Reinforcement Learning for Open-Domain Dialog
Oral Presentation. Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI 2020).
Best Paper Award Nomination. Third NeurIPS Workshop on Conversational AI (ConvAI 2019).

A. Saleh, R. Baly, A. Barron-Cedeno, G. Da San Martino, M. Mohtarami, P. Nakov, and J. Glass
Team QCRI-MIT at SemEval-2019 Task 4: Propaganda Analysis Meets Hyperpartisan News Detection
Thirteenth International Workshop on Semantic Evaluation (SemEval 2019)

PROJECTS

The Tao Te Ching: An NLP Perspective   Aug – Sept 2019
- Collected and analyzed a dataset of 170 English translations of the Tao Te Ching.
- Built an open-source pipeline for understanding philosophical texts through their translations using state-of-the-art natural language processing tools.

On Variational Autoencoders: Generative Models for Dimension Reduction   Nov 2019
- Derived and analyzed variational autoencoders for robust dimension reduction rather than data generation.
- Ran simulation studies showing the effectiveness of VAEs for dimension reduction.

LEADERSHIP & ACTIVITIES

Harvard Summit for Young Leaders in China   Shanghai, China
Seminar Leader   August 2018
- Taught a one-week introductory machine learning seminar to 35 top high school students.