Abdul Saleh

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EDUCATION

Harvard University Cambridge, MA
A.B. in Statistics and Computer Science. GPA 3.9 May 2020
Thesis: Towards Interpretable and Social Dialog Systems
Relevant Coursework: Machine Learning, Statistical Inference, Linear Models, 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 (scikit-learn, TensorFlow, PyTorch, Keras, H2O)
Familiar with: R, SQL, OCaml, C

EXPERIENCE

MIT Media Lab Cambridge, MA
Undergraduate Researcher, Affective Computing Group May 2019 – Present

- Researched reinforcement learning methods for natural language processing.
- Proposed a novel reinforcement learning algorithm for training open-domain dialog systems.
- Implemented dialog systems that can better communicate, understand, and respond to emotions.
- Co-authored a paper under review for AAAI 2020.

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 representations through summarization.
- Co-authored two papers that were presented at NAACL 2019 and SemEval 2019.

FreeWheel New York City, NY
Algorithms Intern Jan 2018

- Implemented a recurrent neural network for time series forecasting in Keras to predict number of views a television advertisement will receive.

PROJECTS

The Tao Te Ching: An NLP Perspective Aug 2019

- Collected and analyzed a dataset of over 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.

Hyperparameter Tuning Stacked Regression Feb 2019

- Analyzed how conventional approaches to tuning stacked models suffer from data leakage.
- Proposed an alternative approach that avoids this weakness and improves model performance.

SELECTED PUBLICATIONS

A. Saleh, N. Jaques, A. Ghandeharioun, J. H. Shen, R. Picard
Hierarchical Reinforcement Learning for Open-Domain Dialog
Under Review. Preprint on website.

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
Proceedings of the 13th International Workshop on Semantic Evaluation (SemEval-2019)

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.
- Covered linear regression, SVMs, clustering, model explainability, and AI ethics.