Corina Florescu

NLP Researcher

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About me

Research scientist with 4 years of academic experience. I work in an area between machine learning, natural language processing, and information retrieval. My research concerns text summarization with focus on keyphrase extraction from unstructured text. I am well connected the academic community and have been presenting my work to various natural language processing and data mining conferences.

Skills

Python

Java

Keras

TensorFlow

SQL

Hadoop

Projects

SurfRank: A supervised keyphrase ranker designed using the pairwise learning-to-rank approach and implemented using a neural network. Keyphrases are ranked based on their relevance to the topic of the document.

SurfKE: A keyphrase extraction model built on features learned by applying network representation learning techniques on a word graph built from text.

PositionRank: An unsupervised approach designed to identify key terms in scholarly documents. The system incorporates the position of words into a graph-based framework.

Education

2015 - Ph.D. Candidate in Computer Science
University of North Texas, Denton, Texas

2008 - 2010 Master of Science
University of Bucharest, Bucharest, Romania

2004 - 2008 Bachelor of Science, Mathematics and Computer Science
University of Bucharest, Bucharest, Romania

Experience

2015 - Research Assistant
Machine Learning Lab, University of North Texas, Denton, Texas

- Developed models for extracting keyphrases from scholarly documents; This extraction task aids indexing of documents in digital libraries, and hence, leads to improved organization, search and retrieval of scientific documents.
- Developed a feature learning framework to automatically discover patterns that keyphrases express using graph representation learning techniques.
- Developed a keyphrase ranking model (based on learning-to-rank), such that the model can rank keyphrases according to their degree of relevance to the topic of the document.

2008 - 2012 Computer Science Teacher
I. L. Caragiale National College, Bucurest, Romania

- Taught programming languages (C++) and database management languages (SQL)
- Designed lecture plans and evaluated students performance.

Selected Publications

2018 Learning Feature Representations for Keyphrase Extraction (AAAI 2018)

2017 PositionRank: An Unsupervised Approach to Keyphrase Extraction from Scholarly Documents (ACL 2017)

2017 A Position-Biased PageRank Algorithm for Keyphrase Extraction (AAAI 2017)

2017 A New Scheme for Scoring Phrases in Unsupervised Keyphrase Extraction (ECIR 2017)

Talks and Tutorials

2018 A Supervised Keyphrase Extraction System based on Graph Representation Learning. *Invited Talk at Oak Ridge National Laboratory.*

2018 *Tutorial* on Improving Search and Retrieval in Digital Libraries by Leveraging Keyphrase Extraction Systems. *In Proceedings of JCDL*.

2018 Learning Feature Representations for Keyphrase Extraction *Poster at UNT Data Analytics Summit, Dallas, Texas*.

Scholarships

2017 Scholarship from American Association for Artificial Intelligence

2017 Travel Grant from Women in Machine Learning

2017 Toulouse Graduate Scholarship, University of North Texas

Professional Interests

Virtual Assistants with focus on Cognitive Behavioral Therapy. For example, Virtual Patients that can be used by therapists in training. Chatbots.