Arman Cohan

Department of Computer Science
Georgetown University
329A, Saint Mary's Hall, 3700 O St NW
Washington, DC 20057

+1 (202)-509-3830
arman@ir.cs.georgetown.edu
http://www.armancohan.com

Last update: September 22, 2017

Research Interests

- Natural Language Processing, Information Retrieval, and applied Machine Learning

Education

- **Doctor of Philosophy in Computer Science** *2013 – 2018 (Expected)*
  Georgetown University, Washington DC, USA
  - *Natural Language Processing, Information Retrieval, & Applications in Medical/Health-Related Text*
  - *Advisor: Dr. Nazli Goharian*
- **Master of Science in Computer Engineering and Information Technology** *2010 – 2012*
  Amirkabir University of Technology, Tehran, Iran
  - *E-Commerce & E-Business*
- **Bachelor of Science in Computer Engineering and Information Technology** *2006 – 2010*
  with distinction
  Amirkabir University of Technology, Tehran, Iran

Publications

2017

- Andrew Yates*, **Arman Cohan***, and Nazli Goharian
  "Depression and Self-Harm Risk Assessment in Online Forums"
  Empirical Methods for Natural Language Processing (EMNLP 2017).
  Equal contribution**, ***EMNLP 2017 Best Long Paper Award
- **Arman Cohan** and Nazli Goharian
  "Scientific Document Summarization via Citation Contextualization and Scientific Discourse"
  International Journal of Digital Libraries (IJDL), 2017.
- **Arman Cohan** and Nazli Goharian
  "Contextualizing Citations for Scientific Summarization using Word Embeddings and Domain Knowledge"
  ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2017)
- **Arman Cohan**, Allan Fong, Raj Ratwani, and Nazli Goharian
  "Identifying Harm Events in Clinical Care through Medical Narratives"
  ACM Conference on Bioinformatics and Health informatics (ACM-BCB 2017).
- Sean MacAvaney, **Arman Cohan** and Nazli Goharian
  "A Framework for Cross-Domain Clinical Temporal Information Extraction"
  International Workshop on Semantic Evaluation (SemEval 2017)

- **Arman Cohan**, Sydney Young, Andrew Yates, Nazli Goharian
"Triaging Content Severity in Online Mental-Health Forums"
Journal of the Association for Information Science and Technology (JASIST), 2017 [In press].

- **Arman Cohan**, Allan Fong, Nazli Goharian, and Raj Ratwani
"A Neural Attention Model for Categorizing Patient Safety Events"
European Conference on Information Retrieval (ECIR 2017).

2016

- **Arman Cohan**, Sydney Young, and Nazli Goharian
"Triaging Mental Health Forum Posts"
NAACL 2016 Workshop on Computational Linguistics and Clinical Psychology (CLPsych 2016).

- **Arman Cohan**, Kevin Meurer, and Nazli Goharian
"Temporal Information Processing in Clinical Narratives"
International Workshop on Semantic Evaluation (SemEval 2016)

- **Arman Cohan**, Luca Soldaini, and Nazli Goharian, Allan Fong, Ross Filice, Raj Ratwani
"Identifying Significance of Discrepancies in Radiology Reports"
SIAM International Conference on Data Mining
Workshop on data Mining for Medicine and Healthcare, (SDM-DMMH 2016)

- **Arman Cohan** and Nazli Goharian
"Revisiting Summarization Evaluation for Scientific Articles"
Language Resources and Evaluation (LREC 2016)

2015

- **Arman Cohan** and Nazli Goharian
"Scientific Article Summarization Using Citation-Context and Article's Discourse Structure"
Empirical Methods for Natural Language Processing (EMNLP 2015)

- **Arman Cohan**, Luca Soldaini, and Nazli Goharian
"Matching Citation Text and Cited Spans in Biomedical Literature: a Search-Oriented Approach."
North American Chapter of the Association for Computational Linguistics (NAACL 2015).

2014

- Luca Soldaini, **Arman Cohan**, Andrew Yates, Nazli Goharian, and Ophir Frieder
"Retrieving Medical Literature for Clinical Decision Support."
European Conference on Information Retrieval (ECIR 2015).

- **Arman Cohan**, Luca Soldaini, and Nazli Goharian
"Towards Citation-Based Summarization of Biomedical Literature."
Text Analysis Conference (TAC 2014).

- Luca Soldaini, **Arman Cohan**, Andrew Yates, Nazli Goharian, and Ophir Frieder.
"Query Reformulation for Clinical Decision Support Search."
Text Retrieval Conference (TREC 2014).

- **Arman Cohan**, Luca Soldaini, Andrew Yates, Nazli Goharian, and Ophir Frieder.
"On Clinical Decision Support."
ACM Bioinformatics, Computational Biology, and Health Informatics (BCB 2014).

Patents

- "Systems and Methods for Targeted Radiology Resident Training" Assignee: Medstar Institute for Innovation (MI2), Application, PCT No. 15/410,850.
  Inventors by alphabetical order: Arman Cohan, Ross Filice, Allan Fong, Ophir Frieder, Nazli Goharian, Raj Ratwani, Luca Soldaini

Talks

- August. 2017, Boston, MA, USA – ACM-BCB Conference
  "Identifying Harm Events in Clinical Care through Medical Narratives"
- May. 2016, Miami, CA, USA – SDM Conference
  "Identifying Significance of Discrepancies in Radiology Reports"
- Oct. 2015, Oeiras, Portugal, Instituto Gulbenkian de Ciencia (IGC)
  "Text Summarization in Biomedical Domain"
- Sep 2015, Lisbon, Portugal – EMNLP Conference
  "Scientific Article Summarization Using Citation-Context and Article's Discourse Structure"
- June 2015, Denver, CO, USA – NAACL Conference
  "Matching Citation Text and Cited Spans in Biomedical Literature: a Search-Oriented Approach."
- Nov. 2014, Gaithersburg, MD, USA – TAC Conference
  "Towards Citation-Based Summarization of Biomedical Literature."

Awards

- EMNLP 2017 Best Long Paper Award *2017*
- ACM-BCB 2017 NSF Travel Award *2017*
- Nominated for Dr. Karen Gale Exceptional PhD Student Award *2017*
- Georgetown University's merit-based fellowship award *2013, 2014, 2015, 2016, 2017*
- Best poster award (second place) - Innovation Center for Biomedical Informatics (ICBI) *2014*
- ACM BCB Travel Award *2014*
- Outstanding undergraduate student award and direct admission to M.Sc. program in the same school *2010*
- Ranked in the top 1% of Iranian National universities Entrance Exam *2006*
- Certificate of Distinction in University of Waterloo's Euclid International Mathematics Contest *2005*
- Accepted in the first round of 3 National Olympiads (Mathematics, Computer Science, and Physics). *2005*

Supervision

- Sydney Young, Undergraduate Project Supervision *Spring & Summer 2016*
- Kevin Meurer, Undergraduate Project Supervision *Fall 2015, Spring 2016*

Research and Teaching Experience

- **Research Assistant** *2013 - Present*
  Information Retrieval Lab *Department of Computer Science, Georgetown University, Washington DC, USA*

  Projects:

  - *Text Summarization*
  - *Citation Analysis*
  - *Summarization Evaluation*
  - *Medical Information Extraction*

- *Medical Text Processing*
- *Health Related Social Media Mining*

Advisor: Dr. Nazli Goharian

- **Internships**
  - *Research Intern* *Summer 2017*
    Adobe Research , San Jose, CA
    Mentor: Dr. Walter Chang
    Project: Summarization of Scientific Documents
  - *Research Intern* *Summer 2016*
    Medstar Health Research – Medstar Institute for Innovation (MI2) , Washington, DC
    Supervisor: Dr. Raj Ratwani
    Project: Identifying Harm in Patient Safety Reports
  - *Research Intern* *Summer 2015*
    Medstar Health Research – Medstar Institute for Innovation (MI2) , Washington, DC
    Supervisor: Dr. Raj Ratwani
    Project: Identifying Critical Discrepancies in Medical Notes

- **Teaching Experience**

Co-instructor – Georgetown University, Computer Science

- Text Mining & Analysis *Fall 2017*
- Health Search and Mining *Spring 2017*

Teaching assistant – Georgetown University, Computer Science

- Data Mining *Spring 2015, 2016, 2017*
- Intro. to Information Retrieval *Fall 2014, 2015, 2016*
- Database Systems *Spring 2015*
- Intro. to Information Systems *Spring 2014*

Professional Leadership & Services

- Co-Organizer, Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL), 2017
- Program Committee Member, Conference on Language Resources and Evaluation (LREC), 2018
- Program Committee Member, Conference on Computational Natural Language Learning (CoNLL), 2017
- Program Committee Member, Conference on Language Resources and Evaluation (LREC), 2016
- Reviewed for: Natural Language Engineering Journal (NLE) & AAAI Conference on Artificial Intelligence (AAAI) 2017

Technical Skills & Languages

- Knowledge *Natural Language Processing, Machine Learning, Deep Learning, Text Mining, Information Retrieval, Health-Related Text Processing and Analytics*
- Programming *Main language:* Python, *familiar with* Java, C#
- Libraries & Frameworks *TensorFlow, Keras, numpy, pandas, Scikit-learn, spacy*
- Languages *English (Fluent), Persian (Native), Turkish (Familiar), French (Beginner)*