Abdullah Abdulaziz Albanyan | Curriculum Vitae

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Education

University of North Texas, Texas, United States *Aug 2019 - May 2023*
Ph.D., Computer Science and Engineering GPA: 4.0/4.0
Dissertation: Artificial Intelligence, Natural Language Processing

Southern Methodist University, Texas, United States *May 2012 - Dec 2013*
M.Sc., Software Engineering GPA: 3.87/4.0

King Saud University, Riyadh, Saudi Arabia *Sep 2004 - May 2009*
B.Sc., Information Systems

Ph.D. Dissertation Title**:** *Deep Learning Methods to Investigate Online Hate Speech and Counterhate Replies to Mitigate Hateful Content*

Employment History

Prince Sattam Bin Abdulaziz University *Apr 2013 - Present*
Lecturer

Prince Sattam Bin Abdulaziz University *Aug 2011 - Apr 2013*
Demonstrator

King Saud University *Jun 2009 - Aug 2011*
Demonstrator

Saudi Basic Industries Corporation (SABIC) *Apr 2008 - Aug 2008*
Trainee

Employment Awards

- Excellence award of Prince Sattam bin Abdulaziz University's best supervisor of student activity (2016-2017)
- Ideal faculty member award for the year (2015-2016)

Research Interests

Artificial intelligence, natural language processing, computational linguistics, information retrieval, sentiment analysis, and opinion mining on social media platforms

Research Projects

1. **Natural Language Processing Projects:**

   Hate speech and counterhate content on social media platforms The standard approach to mitigate hateful online content is removing content or blocking accounts. However, this way restricts free speech on social media. In addition, several replies to the removed hateful content might reflect positively and add significant value to the victims of the hateful claim. For this purpose, we conduct several studies focusing on hate speech and counterhate content on social media:

   A. **Pinpointing Fine-Grained Relationships between Hateful Tweets and Replies (English) [2020 - 2021]**
      We investigate the relationships between hateful tweets and replies on social media to understand how social media users react to hateful content. Additionally, we give finer information on how they counter the hate.
      This work was published at AAAI-22 (AAAI-22 acceptance rate was 15%) and selected to be presented (25% of the published papers were selected for presentation).

   B. **Mitigating the Risks of Counterhate Arguments *(ongoing project)* (English) [2022 - 2023]**
      We want to analyze replies to counterhate tweets to understand when a counterhate tweet increases the heat of the conversation and makes it more argumentative conversation or worse. Specifically, we want to understand what kind of language people use in their counterhate tweets that lead to more hate instead of stopping it. Additionally, we intend to create a neural classifier built on top of a pre-trained language model to identify the type of reply a counterhate tweet will elicit.

   C. **Analyzing replies to Arabic hateful tweets *(ongoing project)* (Arabic) [2023 - present]**
      We want to analyze the replies to Arabic hateful tweets to understand how people on social media platforms respond to Arabic hateful messages. We will create an Arabic tweet corpus with fine-grained information about the replies. We will also create a neural classifier to determine the relationship between hateful tweets and replies.

2. **Image Processing Projects:**

   A. **Deep Tumor Track Network [2017-2018]**
      It has been drawn to our attention that the current physicians do not have an accurate tumor tracker than their natural sense. This may cause fatigue among physicians that may provide inaccurate results. Patients may also experience over-delivery of radiation to unwanted areas to radiation, which could extend unnecessarily long therapy sessions. The availability of advanced technologies to get the accurate position of tumors will allow physicians to reduce their fatigue while helping patients to reduce their recovery time and thus lower the medical costs for their treatment. This paper proposed a novel system for real-time tumor tracking on video using deep neural networks.

   B. **Document Boundary [2019]**
      An intelligent system that helps scan multiple documents at once, and the goal is to detect the last page of each document automatically. The model reads overlapped documents and divides them into separate files, using novel techniques to build an intelligent model. The model separates the documents by detecting the last page of each file within the whole document. This system can help employees be time-consuming in arranging or collecting overlapping documents.

3. **<u>Software Engineering Projects:</u>**

    - **Power Rationalization System [2009]**
    - **Automated Alarm System Functional/ non-Functional Requirements [2012]**
    - **User Interface Design for Health Care Web Application [2012]**
    - **Test an Online Room Reservation System [2013]**

Open-Sourced Projects (*https://github.com/albanyan*)

1. Document Boundry Project
   https://github.com/albanyan/DocumentBoundary

2. Hateful Message and Reply Project
   https://github.com/albanyan/hateful-tweets-replies

3. Mitigating the Risks of Counterhate Replies
   https://github.com/albanyan/counterhate_reply

Publications

1. **Abdullah Albanyan**, Ahmed Hassan, and Eduardo Blanco. 2023. Not All Counterhate Tweets Elicit the Same Replies: A Fine-Grained Analysis. The 12th Joint Conference on Lexical and Computational Semantics (*SEM), Co-located with ACL 2023. (Accepted, To Appear)

2. Shabbab Algamdi, **Abdullah Albanyan**, and Stephanie Ludi. 2023. *Investigating the Usability Issues in Mobile Applications Reviews Using A Deep Learning Model*. **IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC).**

3. Shabbab Algamdi, **Abdullah Albanyan**, Sayed Shah, and Zeenat Tariq. 2022. *Twitter Accounts Suggestion: Pipeline Technique SpaCy Entity Recognition***. IEEE International Conference on Big Data**, pp. 5121-5125.

4. **Abdullah Albanyan** and Eduardo Blanco. 2022. *Pinpointing Fine-Grained Relationships between Hateful Tweets and Replies*. **Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)**, **[Acceptance rate 15%]**, 36(10), 10418-10426.

Teaching Experience

- Software Project Management
- Fundamentals of Software Engineering
- Human-Computer Interaction
- Computer Programming I (in C language)
- Computer Programming I (in C++ language)
- Computer Programming I (in Java language)
- Computer Skills Course
- Discrete Mathematics

Work Responsibilities

- Supervisor of the cooperative training unit
- Supervisor of the student activities committee
- Coordinator of the alumni committee
- Coordinator of scholarships committee
- Academic advising
- Representative of the training unit
- Representative of the alumni unit

Academic Services

- Program Committee at AAAI (2023)
- A reviewer at ACL (2023)

Technical Skills

Programming	Python, C++, Java, R, Matlab
Machine Learning	Neural Networks, SVM, PCA, BiLSTM, CNN, etc.
Pre-trained models	BERT, Bertweet, Roberta, Longformer, ALBERT, etc.
ML Tools	PyTorch, Keras, TensorFlow

Personal Profile

- Fast learner
- Technical skills
- Teaching skills
- Flexible, enthusiastic, motivated, and team-oriented

Workshops

- Learning Outcomes & Tests Matrix
- Designing electronic courses workshop
- Educational Output Assessment System for the College Programs
- Workshop about using blackboard in teaching
- GITEX technology exhibition in Dubai & Riyadh
- Information security workshop in KSU, Riyadh
- The second National Computing Colleges Conference, University of Hail