

Emad A. Alghamdi

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Education

University of Melbourne, Australia 2017 – 2021

PhD in Computational Linguistics

Thesis: "Automated Video Difficulty Assessment"

I was awarded **the Chancellor's prize** for excellence in PhD thesis 2022

Co-supervised by Dr. Paul Gruba (Linguistics) and Dr. Eduardo Velloso (Computer Science)

Missouri State University, USA 2012 – 2014

M.S. in Educational Technology

GPA: 4/4

Missouri State University, USA 2010 – 2013

M.A. in English Linguistics

GPA: 3.97/4

Projects

Automatic Text Difficulty Adjustment 2022–2023

- An innovative web reading system that automatically adjusts reading difficulty
- The system uses advanced NLP methods, sensor technologies (eye-tracker and thermal camera)
- The project is a collaboration with expert researchers from **Adobe Inc and Cambridge University**.

Arabic Font Optimization 2022–2023

- The project aims to develop an innovative approach to optimize Arabic font for better reading experience.
- The project is a collaboration with expert researchers from **Google Font Team**.

Masader Plus 2022–2023

- Masader Plus is the first online catalogue for Arabic NLP datasets.
- This catalogue contains 500+ datasets with more than 25 metadata annotations for each dataset.
- Masader Plus can be found at <https://arbml.github.io/masader/>

Arabic Text Readability 2022–2023

- An open-sourced web app for assessing text readability for Saudi students in general education (K1-12)
- The system uses advanced NLP and machine learning methods (weak supervision)
- The project with NLP researchers from **King Abdulaziz City for Science and Technology**.

Automated Video Analysis Software 2022–2023

- A cross-platform desktop software for automated video analysis.
- Uses advanced computer vision algorithms and methods for analyzing video contents.
- The project is funded by **SAGE Publishing**.

KAUx 2013–2017

- KAUx is the first MOOC platform in Saudi Arabia.
- It offers free online training courses to university faculties and students

CrowdyQ 2015

- A virtual crowdsourcing platform for generating and evaluating test items

Scholarships, Awards, and Grants

The Chancellor's prize for excellence in PhD thesis	2022
◦ My PhD thesis was awarded the Chancellor's prize for excellence in PhD thesis in the University of Melbourne	
SAGE Concept Grants	2022
◦ My software AUVANA was awarded SAGE Concept Grants £2,000.	
Research Excellence Award	2019
◦ Awarded by the Saudi Cultural Attaché in Australia.	
PhD Scholarship	2017–2021
◦ Received for pursuing my PhD research at the University of Melbourne.	
Excellence Award	2012-2013
◦ Awarded by the Saudi Cultural Attaché in USA for excelling academically throughout the school year.	
Certificate of Appreciation	June 2019
◦ Awarded by the Saudi Cultural Attaché in Washington, D.C for leadership as a president of the Saudi Club at Missouri State University.	
Letter of Appreciation	June 2019
◦ Awarded by the Saudi Cultural Attaché in Washington, D.C for writing an article about volunteerism.	

Experience

Director of the AI in Language Learning & Assessment Lab	2022
<i>http://www.ailla.tech</i>	
A group of researchers and innovators who are interested in developing innovative language learning and assessment applications using cutting edge AI	
Head of Research Unit	2022
<i>English Language Institute, King Abdulaziz University</i>	
Created five research interest groups (40+ PhD researchers)	
Assistant Professor in Computational Linguistics	2022
<i>King Abdulaziz University</i>	
Data Scientist Intern	September 2020 – February 2021
<i>Melbourne Data Analytics Platform, University of Melbourne</i>	
◦ Worked on NLP projects using weak supervision techniques	
Causal Instructor	July 2019 – August 2019
<i>University of Melbourne</i>	
◦ Taught a Master-level course on Technology and Language Learning	
Founder & CEO	2015 – 2017
<i>Dropzin - On-demand Shipping & Delivery</i>	
◦ Founded the startup	
◦ Administered day-to-day operations	
Director of e-training Unit	2014 – 2016
<i>King Abdulaziz University</i>	
◦ Founded KAUx an Arabic MOOC platform	
◦ Led a team of faculty members, administrators, and on-site and remote technicians	
◦ Designed and developed two MOOCs on innovation and critical thinking	
Head of Distance Learning Unit	2013 – 2016
<i>King Abdulaziz University</i>	
◦ Administered online English programs (7K+ Students) and 40+ instructors	
◦ Trained faculty members on using several education technologies	
Lecturer	2008-2010 – 2013-2016
<i>King Abdulaziz University</i>	
◦ Taught English courses for university students	

Personal Development

Machine Learning with TensorFlow on Google Cloud Platform	2018
<i>Coursera-A 5-course specialization by Google Cloud</i>	

- Introduction to TensorFlow
- How Google does Machine Learning
- Feature Engineering
- Launching into Machine Learning
- Art and Science of Machine Learning

International License for Entrepreneurship 2016
75-hour Training Course, Jeddah, Saudi Arabia

Design and Development of Educational Technology, MIT 2014
edX

Entrepreneurship 101: Who is your customer?, MIT 2014
edX

Statistics: Making Sense of Data, University of Toronto 2014
Coursera

Competitive Strategy, Ludwig-Maximilian University of Munich 2013
Coursera

Justice, Harvard 2013
edX

Inspiring Leadership through Emotional Intelligence, Case Western Reserve University 2013
Coursera

Internet History, Technology,& Security, University of Michigan 2012
Coursera

Publication

Book Chapters:

- Nawaz, Sadia, **Alghamdi, Emad A**, et. al (2022). Understanding the role of AI and learning analytics techniques in addressing task difficulties in STEM education. In: Artificial Intelligence in STEM Education: The Paradigmatic Shifts in Research, Education, and Technology.
- **Alghamdi, Emad A** (2018). Effects of Using Multimodal Glosses in Video Games to Enhance Incidental Vocabulary Learning and Retention. In: Handbook of Research on Integrating Technology Into Contemporary Language Learning and Teaching. Chap.2, pp.427–448

Journal Articles:

- **Alghamdi, Emad A**, Paul Gruba, and Eduardo Velloso (2022). The Relative Contribution of Verbal Complexity to Second Language Video Lectures Difficulty Assessment. The Modern Language Journal: 4/194 (Linguistics)
- **Alghamdi, Emad A**, Paul Gruba, Ahemd Mersi, et al. (2022). The Use of Lexical Complexity for Assessing Difficulty in Instructional Videos. Language Learning and Technology. 8/194 (linguistics).
- **Alghamdi, Emad A**, Eduardo Velloso, and Paul Gruba (2021). AUVANA: An Automated Video Analysis Tool for Visual Complexity. DOI: <https://doi.org/10.31219/osf.io/kj9hx>
- **Alghamdi, Emad A** and Sayyed Rashid Shah (2018). Exploring the Effects of Mobile-Based Audience Response System on EFL Students' Learning and Engagement in a Fully Synchronous Online Course. International Journal of English Linguistics 8.3, p.92. DOI:10.5539/ijel.v8n3p92
- **Alghamdi, Emad A** and Hussam Rajab (2016). Unmonitored students self-created WhatsApp groups in distance learning environments: A collaborative learning tool or cheating technique. International Journal of Research, 5.2, pp.71–82
- **Alghamdi, Emad A** (2016). Untangling Multimedia Effects on EFL Incidental Vocabulary Learning via Playing an Online Hidden-Object Game. International Journal of Computer-Assisted Language Learning and Teaching, 6.1, pp.24–39. ISSN:2155-7098
- **Alghamdi, Emad A** (2015). The Representation of Islam in Western Media: The Coverage of Norway Terrorist Attacks. International Journal of Applied Linguistics and English Literature, 4.3, pp.198–204. ISSN:22003592
- **Alghamdi, Emad A** (2014). Gulf Pidgin Arabic: A Descriptive and Statistical Analysis of Stability. International Journal of Linguistics, 6.6, p.110

Conference Proceedings:

- ARBML Group (2022). Masader Plus: A New Interface for Exploring +500 Arabic NLP Datasets. EMNLP.
- **Alghamdi, Emad A**, Fahad Otaif, and Paula Gruba (2018). Designing a video playing interface for second language learners. ASCILITE2018. November, pp.298–302
- **Alghamdi, Emad A**, N. R. Aljohani, et. al. (2015). CrowdyQ: A virtual crowdsourcing platform for question items development in higher education. 17th International Conference on Information Integration and Web-Based Applications and Services, iiWAS2015-Proceedings

VOLUNTEER

Founding Director <i>Afaqi Learning Hubs</i>	2015 – 2016
President of the Saudi Student Club <i>Missouri State University, MO, USA</i>	2012-2013
English-Arabic Translator <i>TED</i>	2012-2014
Journal Reviewer <i>Behavior Research Methods, Language Learning and Technology, Interactive Learning Environments, Sage Open</i>	

Skills

Natural Languages: Arabic (Native), English (Fluent)

Programming Languages: Python, R, JavaScript

Machine Learning, NLP, & CV: TensorFlow, Keras, Scikit-learn, spaCy, OpenCV, NLTK

Web and Desktop Technologies: HTML, CSS, AWS, Vue, Electron, Django, Flask. Streamlit

Statistics: RStudio, SPSS