## Mohammed Kamel Almotrafi

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#### **EDUCATION**

PhD in Data Analytics Oct 2018 – Oct 2022 University of Sheffield- United Kingdom Jan 2015 – Dec 2016 **MSc in Computer Science** University of Missouri- United States Leadership Diploma Dec 2015 – Dec 2016 University of Missouri- United States BSc in Information Technology (Hons) Aug 2008 – Aug 2012 Northern Border University-Saudi Arabia

#### CERTIFICATIONS

**Certified KPI Professional** The KPI Institute

#### **PROFESSIONAL AND ACADEMIC EXPERIENCE**

#### Assistant Professor

Northern Border University – KSA Faculty Of Computing and Information Technology Information Systems Department

#### **Research Collaborator**

Princeton University-United States

- Conducted a research project on Network Analysis of Spatial Proximity and Assortative Mixing in Neighborhood Crime Dynamics, analyzing more than 4,000,000 data points.
- Submitted research findings for publication in Social Network Analysis Journal and presented at the International Conference of Social Network Analysis in July 2021 & 2022.

## Artificial Intelligence Course Consultant

Saudi Data and Artificial Intelligence Authority (SDAIA)

 Lead technical content review for the Future Intelligence Programmers project (In partnership with Bayan and Princess Nourah bint Abdulrahman University).

## **Data Science Content Writer and Reviewer**

The National eLearning Center – Saudi Arabia

- Wrote helpful, accurate, well-organized, consistent, and highly effective content from scratch.
- Worked with the organization to review and edit documentation throughout the writing process.

#### **Data Analytics Consultant**

The University of Manchester (In partnership with the British Council) - United Kingdom

- Identified, aggregated, and analyzed data for engagement in exploratory data analysis and model development.
- Planned periodic meetings to ensure continuous communication with business owners and data beneficiaries to understand their needs and improvement opportunities to consider in the planning.
- Used the British Council data for Southeast Asian countries to analyze the network structure and understand how the Council creates a platform for economic power to meet cultural power.



Aug 2022 – Oct 2022

Apr 2022 – Aug 2022

Jun 2021

Oct 2022 – Present

Jun 2021 – Present

Apr 2022 – May 2023

# Jun 2020

Jun 2021 – Aug 2022

Jun 2021 – Sep 2021

American Violence project (New York Crime Data Center)

- Applied statistical analyses to more than 46,000 incidents covering nationwide historical crime data, searching for meaningful insights and validating the results to develop predictive models.
- Developed three distinct models for predicting how mobility flows and similarity in neighborhood attributes foster shooting incidents dynamics in Chicago using Social Network Analysis in Crime data, US census data, and a Mobile Phone Origin Destination (MPOD) dataset.

## **Digital Strategy Advisor**

Confidential

- Assessed current state of a governmental entity, determined data office and IT department needs.
- Architected digital strategy planning and identified 10 initiatives, process improvements and efficiency enhancements to enable expansion plans for new and existing products and processes.
- Spearheaded the creation of a digital development roadmap used to improve the data entry systems to increase the data quality.
- Systematized automated weekly, monthly and quarterly statistics reports, reducing preparation time from weeks to minutes.

## **Graduate Teaching Assistant of Data Analytics**

The University of Sheffield- United Kingdom

**Politics and International Relations Department** Oct 2021 - Feb 2022 Module: Political Data Analysis Data used: BES survey data, Norris's Democracy Cross-national data & 2014 Scottish independence referendum data

## **Sheffield Methods Institute**

Module: Social Data Analysis Data used: European Social Survey

## CORE COMPETENCIES

- Ability to deliver valuable insights via data analytics and advanced data-driven methods
- Understanding and expertise in strategically using technology to enable business strategy •
- Cooperate with other data related functions to improve the current products and services
- Participate in the review and evaluation of the sector's achievements and corrective actions
- Skilled in guidance, problem-solving, and conflict management to ensure smooth workflow
- Solid communication skills, seamlessly interface between technical and non-technical teams
- Sound interpersonal and organizational skills with the ability to prioritize and multi-task

# **SKILLS HIGHLIGHTS**

Data Science & Analytics	Data Management Fundamentals	Team Leadership
Analytical Principles & Practices	Predictive Modelling	Data Visualization
Thought Leadership	Requirement Gathering	
Primary/Secondary Statistical Data Analys	is	

Technical Skills: R, Python, Java, SQL, SPSS, Gephi, Excel

## **CONFERENCE PAPERS AND PRESENTATIONS**

Mohammed Almotrafi, Gwilym Pryce and Nathan Hughes

"Network Analysis of Spatial Proximity and Assortative Mixing in Neighborhood Crime Dynamics" International Conference of Social Network Analysis, Washington D.C, USA

## Mohammed Almotrafi, Gwilym Pryce and Nathan Hughes

#### Data Analyst

Feb 2021 - Jun 2021

Jul 2021

• *"When Crime Rates Move Together: What can we learn from linking neighborhoods by their crime trajectories?"*, The 6th International Conference on Computational Social Science at MIT, Boston, USA

## Mohammed Almotrafi and Gwilym Pryce

• *"Is it possible to cluster similar neighborhood crime trajectories based on the curve shape?"*, 3rd International Conference on Big Data Research, Paris, France

Nov 2019

Under Review

## JOURNAL ARTICLES

Mohammed Almotrafi, Gwilym Pryce and Nathan Hughes

 "Network Analysis of Spatial Proximity and Assortative Mixing in Neighborhood Crime Dynamics", Social Network Analysis Journal

# Mohammed Almotrafi, Gwilym Pryce and Nathan Hughes Submitted for Publication

• "When Crime Rates Move Together: What can we learn from linking neighborhoods by their crime trajectories?", Journal of Quantitative Criminology

## **KEY ACHIEVEMENTS**

- Awarded as an outstanding PhD student for 3 consecutive years by the Saudi Arabian Cultural Bureau in London.
- Admitted and earned a full scholarship for the Graduate Student Leadership Development Program among 28 students to represent 15000+ graduate students at the University of Missouri.
- Proposed, developed, and wrote a study plan for a Business Intelligence track.
- Trained 100+ postgraduate students on using R for data analysis in quantitative research.
- Gained access to rich datasets needed for a research project after successfully convincing the data owners of the added value of the project.
- Wrote and reviewed 22+ well-organized, consistent, and highly effective Data Science and AI content from scratch.
- Translated and reviewed 15+ case studies on how successful companies used big data analytics to deliver extraordinary results in 9+ sectors.

## **DATA COURSES and WORKSHOPS**

- Social Analytics & Visualization (Fall 2019)
- Text Mining and Analysis (Fall 2019)
- Data Visualization (Fall 2019)
- Social Network Analysis (Fall 2019)
- Advanced Quantitative Methods (Spring 2019)
- Principles of Research Design (Fall 2018)
- Introduction to Quantitative Research (Fall 2018)

# **VOLUNTEER WORK**

# **Data Analysis Training**

Trained 100+ postgraduate students on using R for data analysis in quantitative research.

Equality, Diversity, and Inclusion Officer

Saudi Student Association at The University of Sheffield

Strategic Partnership Committee

Saudi Society for Data Science