CONTACT INFORMATION
Dr. Kadan ALJOUMAA
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1. SUMMARY OF QUALIFICATIONS

1.1 Degree and completed courses and programmes

- PhD in Computer Science, Pantheon-Sorbonne University, France (2008–2011)
- MBA, Higher Institute of Business Administration (HIBA), Damascus (2005–2007)
- Master in Distributed Systems & Databases, University of Versailles, France (2002–2003)
- Diploma of Computer Science Engineer, Higher Institute for Applied Sciences and Technology (HIAST), Damascus (1985–1991)

1.2 Employment history

- Head of Intelligent Information Systems Department, Syrian Private University (SPU) (2025–2026)
- Head of Information Systems Laboratory, HIAST (2020–2025)
- Director of Informatics Services and Systems Development, HIAST (2014–2024)
- Associate Professor/Lecturer, HIAST (2004–Present)
- Big Data Consultant, Telecommunications Sector (2016–Present)

1.3 Other experience of relevance

- Data Analytics Trainer, Private Sector, (2025–Present)
- Big Data Master Program Coordinator, HIAST (2017–2025)
- Chairman, Department of Informatics Engineering, Syrian Engineers Syndicate (2010–Present)
- Board Member, Syrian Computer Society (2017 and 2021)

2. SCIENTIFIC EXPERTISE

2.1 Research activities and findings

- My research focuses on **Big Data Analytics, and AI-driven solutions** applied to healthcare, telecommunications, and public services. I have led projects in predictive modeling, blockchain for health records, and customer segmentation using deep learning. My work has been published in international journals such as *Journal of Big Data* and presented at IEEE conferences. I maintain an independent research profile with a strong emphasis on applied AI and data engineering.

2.2 Other research appointments, Honors and awards

- Editorial Board Member, International Journal of Informatics Researches
- Program Committee Member, IADIS International Conference on Information Systems (2014)
- Reviewer for Journal of Big Data
- Reviewer for Damascus University Journal

3. TEACHING EXPERTISE

3.1 Reflections on my own teaching

- My teaching philosophy is centered on practical, project-based learning that bridges theory and real-world application. I design courses to foster analytical thinking, hands-on tool mastery (Power BI, Tableau, Python, SQL), and data storytelling skills. I emphasize interactive dashboards, case studies, and industry-relevant projects to prepare students for careers in data engineering and AI.

3.2 Teaching experience

- First cycle: Databases, Advanced Databases, Data Mining, Systems Analysis & Design, Software Engineering, Advanced Web Applications (HIAST, HIBA, SVU, SPU)
- Second cycle: Big Data Fundamental, Big Data Techniques, Web Databases, NoSQL Databases, Social Network Analysis, Web Service-based Application (HIAST), Management Information Systems (MBA at HIBA)
- Third cycle: Supervision of Master's and PhD theses in Big Data and Information Systems
- Professional training: Workshops on Power BI, Python, and SQL for professionals

3.3 Experience as a supervisor

- First cycle: Supervised over 100 projects undergraduate students at HIAST, HIBA, Syrian Virtual University (SVU), SPU in Databases, Software Engineering, Web Application, BI, and Marketing, healthcare analytics
- Second cycle: Supervised over 25 Master's theses in Big Data, BI, and healthcare analytics at HIAST, HIBA, SVU.
- Third cycle: Currently supervising 2 PhD candidates in sentiment analysis and dynamic positioning at HIAST, and 1 PhD candidate in Sustainable Framework for Innovation and Entrepreneurship at SVU.

3.4 Course development and course administration

- Lead architect of the Big Data Master Program at HIAST
- Developed curricula for Data Science: Big Data Fundamental, Big Data Techniques, NoSQL Databases, Social Network Analysis, Web Service-based Application courses
- Integrated industry tools and real datasets into course materials

3.5 Teaching material

- Developed course compendiums, lab manuals, and case studies for Big Data, BI, and Web Services courses

3.6 Other activities related to teaching

- Conducted professional workshops on Data Analytics
- Participated in teaching seminars and curriculum review panels

4. ADMINISTRATIVE EXPERTISE AND MANAGEMENT EXPERIENCE

4.1 Assignments and experience

- Managed IT infrastructure, software projects, and technical teams at HIAST
- Oversaw research labs and departmental strategic planning
- Coordinated accreditation and development of the Big Data Master Program

4.2 Planning and organizing conferences

- Participated in organizing sessions for local conferences

5. COMMUNITY INTERACTION

5.1 Interaction with the community

- Collaborated with telecom, healthcare, and public sectors on data projects
- Advised on blockchain implementations for health records and secure transactions
- Engaged with industry through training and consultancy in Big Data and BI

5.2 Information about research and development

- Delivered public lectures and workshops on Big Data, and BI
- Media contributions and expert commentary on data science trends

6. PUBLICATIONS (complete list)

6.1 Peer-Reviewed Articles

1. Ahmad Debow, Samaah Shweikani, Kadan Aljoumaa, "***Predicting and forecasting water quality using deep learning***", International Journal of Sustainable Agricultural Management and Informatics 9(2):114, 2023.
2. W Al Noumah, A Jafar, K Aljoumaa, "***Using parallel pre-trained types of DCNN model to predict breast cancer with color normalization***", BMC research notes 15, 1-6. 2022.
3. Alice Azar and Kadan Aljoumaa, "***Building a Blockchain Framework for Personal Health Records Based on the Analysis and Evaluation of Existing Solutions"***. Journal of Engineering and Applied Sciences, 16: 152-160. DOI: 10.36478/jeasci.2021.152.160. 2021.
4. Rami Ammar, Assef Jaffar and Kadan Aljoumaa, "***Unsupervised Speaker Retrieval and Identification in Large Scale Environment"***. Journal of Engineering and Applied Sciences, 15: 2457-2463, 2020. https://medwelljournals.com/abstract/?doi=jeasci.2020.2457.2463
5. Alkhayrat, M., Aljnidi, M. & Aljoumaa, K. ***A comparative dimensionality reduction study in telecom customer segmentation using deep learning and PCA***. *J Big Data* **7,** 9 (2020).

https://doi.org/10.1186/s40537-020-0286-0

6. Ibrahim Alzuabi, Assef Jafar and Kadan Aljoumaa, ***Predicting customer's gender and age depending on mobile phone data***, Journal of Big Data (SpringerOpen), 2019.
7. Abdelrahim Kasem Ahmad, Assef Jafar and Kadan Aljoumaa, ***Customer churn prediction in telecom using machine learning in big data platform***, Journal of Big Data (SpringerOpen), 2019.
8. R. Achi, K. Aljoumaa, and S. Dowaji: "***PISWAS: Improving What-If Analysis Model to Suggest the Best Offers Scenarios in Telecom Companies***" International Review on Computers and Software (IRECOS), December 2016, Italy.

6.2 Other Academic Articles

1. S. Assar, C. Souveyet and K. Aljoumaa: "***A goal-oriented perspective on approaches to web service discovery***" Proceedings 6th Int. IEEE Workshop on Requirements Engineering For Services (REFS 2012), in conjunction with COMPSAC 2012, July 16-20, 2012, Izmir – Turkey.
2. K. Aljoumaa and S. Assar: "***Matching user requirements with query formulations in intentional service oriented computing***" Proceedings 5th International IEEE Workshop on Requirements Engineering For Services (REFS 2011), in conjunction with COMPSAC 2011, July 18-21, 2011, Münich – Germany.
3. K. Aljoumaa, S. Assar, C. Souveyet: "***Intentional services publication (position paper)***" (In French) Proceedings 29th INFORSID conference, May 24-26, 2011, Lille – France.
4. K. Aljoumaa, S. Assar, and C. Souveyet: "***Publishing Intentional Services using extended semantic annotation***" Proceedings RCIS'2011: 5th IEEE International Conference on Research Challenges in Information Science (RCIS), May 19-21, 2011, Guadeloupe, French West Indies – France.
5. K. Aljoumaa, S. Assar and C. Souveyet: "***Reformulating user's queries for Intentional Services Discovery using an Ontology-based Approach***" Proceedings NTMS'2011: 4th IFIP Int. Conf. on New Technologies, Mobility and Security, 7- 10 February 2011, Paris – France.
6. K. Aljoumaa, S. Assar and C. Souveyet: "***Publishing intentional services using new annotation for WSDL***" Proceedings iiWAS '10: 12th Int. Conf. on Information Integration and Web-based Applications & Services, ACM, 08-10 November 2010, Paris – France.

6.3 Other Academic Works

1. T. Hassan, and K. Aljoumaa: "***Symantec web services discovery***", Damascus university journal, December 2015.
2. M. Hilal, S. Dowahji and K. Aljoumaa: "***Multidimensional design, a comparative survey on methodologies that use ontologies***", Australian Journal of Basic and Applied Sciences (AJBAS) ISSN 1991-8178, April 2015.
3. Bitar, R. Khazem and K. Aljoumaa: ***"conceptual framework for combining scenario planning and multi-criteria decision analysis"***, Proceedings 2nd International

Conference on Business, Economics, Marketing & Management Research (BEMM'14), December 2014, Monaster, Tunisia.

4. K. Aljoumaa: "***Vers une ontologie partagée pour formuler le but de l'utilisateur et l'intention de service***", Manifestation des Jeunes Chercheurs en Sciences et Technologies de l'Information et de la Communication (MajecSTIC'2010), 13-15 October 2010, Lille, France.

7. Languages

- Arabic (Native), English (Fluent), French (Fluent), Spanish (Fluent), Italian (Intermediate), German (Intermediate)