PERSONAL INFORMATION

Bilal Nakhal

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Sex Male | Date of birth 22/01/1985 | Nationality Lebanese



WORK EXPERIENCE

Sep-2024 to Present

Coordinator, Beirut Arab University, Faculty of Science, Bekaa Campus

- Plan and develop the semester course offering for the Faculty of Science.
- Coordinate course schedules, sections, and classroom assignments.
- Recommend and support instructors for all offered courses.
- Advise students on course selection, academic requirements, and registration issues.
- Resolve academic conflicts and address student or instructor concerns.
- Monitor course enrolment and make necessary scheduling adjustments.
- Organize and manage faculty events, workshops, and academic activities.
- Build partnerships with industries and companies to support training and collaboration.
- Plan, maintain, and monitor laboratory needs, logistics, and safety standards.
- Ensure lab equipment, supplies, and academic resources are available and up to date.
- Prepare academic reports, support accreditation requirements, and track performance indicators.
- Communicate official information between students, faculty, and administration.
- Assist with exam preparation, scheduling, and invigilation planning.
- Support curriculum development and the continuous improvement of academic programs.
- Represent the faculty in meetings and contribute to strategic academic planning.

Oct-2021 to Present

Assistant Professor at the Department of Mathematics & Computer Science Beirut Arab University (Lebanon)

- Teaching various undergraduate and graduate Computer Science core courses
- Major contributor in applying and preparing ABET accreditation requirements
- Acting as a leader/contributor in several academic committees in the department
- Acting as a co-advisor for Computer Science PhD candidates
- Supervising Senior and Thesis projects for BS and MS Computer Science students
- Attending all internal and external activities identified by the upper management and faculty board (meetings with labour market and companies' representatives, competitions, workshops at Erasmus+ ELEGANT project)
- Working on various research fields (Virtual Reality, Metaverse, Cybersecurity, Intrusion Detection Systems, Federated Learning, and Blockchain) with colleagues and students

Jan-2019 to Sep-2021

Acting Dean of Faculty of Sciences & Fine Arts
Arts, Sciences and Technology University in Lebanon (Lebanon)

- Leading and coordinating strategic planning and curriculum development at the faculty
- Providing the faculty with its divisions with academic leadership to encourage excellence in executing the academic programs and research work
- Continuously planning and developing academic programs to ensure meaningful academic outcomes with intended high quality
- Managing activities at the faculty level within the framework of the university's strategic plan by effectively using available resources
- Supporting heads of departments in the faculty and holding them accountable for the proper discharge of their departmental responsibilities
- Assisting in the development of a compelling and inclusive vision for research

Jan-2012 to Sep-2021

Chairperson/Coordinator of Computer Science Department
Assistant Professor at Computer Science Department
Arts, Sciences and Technology University in Lebanon (Lebanon)

- Leading and managing the Computer Science department among all branches
- Teaching Computer Science major courses and labs (12 courses per year)
- Developing the CS curriculum and offered courses
- Ensuring that teaching, curriculum and student outcomes are in line with high international standards
- Participating and managing administrative and organisational tasks
- Attending internal and external meetings identified by the upper management and faculty board
- Studying and processing academic profiles and petitions of students at all branches
- Supervising Senior projects and Thesis projects for Computer Science students

2007–2012

Senior Web Developer

Cyberbase Digital, Beirut (Lebanon)

- Building websites using XHTML, JavaScript, JQuery, XML, PHP and SQL
- Hosting and managing VPS servers
- Troubleshooting and support

EDUCATION AND TRAINING

2014–2017

Ph.D. in Computer Science - Virtual Reality

Docteur de l'Université de Bretagne Occidentale

École Nationale d'Ingénieurs de Brest – ENIB/CERV/LABSTICC, Brest (France)

Thesis: Generation of Communicative Intentions for Virtual Agents in an Intelligent Virtual Environment

2006–2009

Master of Science in Computer Science & Communication

Arts, Sciences and Technology University in Lebanon, Beirut (Lebanon)

Thesis: Meta-search Engine and Data Web-housing including the Challenging Technologies and Performance Tuning Techniques

2002–2005

Bachelor of Science in Computer Sciences

Arts, Sciences and Technology University in Lebanon, Beirut (Lebanon)

ADDITIONAL INFORMATION

Publications

- Said, N., Nakhal, B., El-Zaart, A., & Affara, L. (2026). Dual RANSAC with Rescue Midpoint Multi-Trend Vanishing Point Detection. *Journal of Imaging*, *12*(4), 172.

- Soloh, R., Nakhal, B., & Chakik, A. E. (2026). Optimization-Driven Multimodal Brain Tumor Segmentation Using α-Expansion Graph Cuts. *Computation*, *14*(3), 70.

- El Abed, A., Nassreddine, G., Nakhal, B., & El Chakik, A. AI-powered strategies for early detection and prevention of severe diseases. In *Transformative Technologies* (pp. 16-34). CRC Press.

- Yassine, H. A. K., El Saleh, M., Nakhal, B. E., & El Chakik, A. (2025). Centralized Two-Tiered Tree-Based Intrusion-Detection System (C2T-IDS). *IoT*, *6*(4), 67.

- El Ghor, H., Nakhal, B., Nasr, S., & Daher, M. (2025, February). Decentralizing Social Data: A Blockchain-Based Approach to Transparent and Trustworthy Social Networks. In *2025 5th IEEE Middle East and North Africa Communications Conference (MENACOMM)* (pp. 1-8). IEEE.

- Al Najjar, M., Mahboub, R., Nakhal, B., & Gaber Ghanem, M. (2024). Exploring the Role of AI in Improving VAT Reporting Quality: Experimental Study in Emerging Markets. *Journal of Risk and Financial Management*, *17*(11), 477.

- Al Najjar, M., Gaber Ghanem, M., Mahboub, R., & Nakhal, B. (2024). The Role of Artificial Intelligence in Eliminating Accounting Errors. *Journal of Risk and Financial Management*, *17*(8), 353.

- Ghor, H. E., Daher, M., & Nakhal, B. (2024). A Novel Blockchain-Based Approach for Secure and Efficient Electronic Medical Record Sharing. Algorithms in Advanced Artificial Intelligence: ICAAAI-2023, 124.

- El Ghor, H., & Nakhal, B. (2023). A Blockchain-Enabled Approach for Secure Data Sharing in 6G-based Internet of Things Networks. In Wireless Networks: Cyber Security Threats and Countermeasures (pp. 227-246). Cham: Springer International Publishing.

- AFFARA, L. A., & NAKHAL, B. E. (2023). COMPUTER VISION AIDED HOTSPOT CREATION IN VIRTUAL ENVIRONMENTS. Architecture and Planning Journal (APJ), 28(3), 5.

- CHEHAB, A., & NAKHAL, B. (2023). EXPLORING VIRTUAL REALITY AS AN APPROACH TO RESURRECT DESTROYED HISTORICAL BUILDINGS-AN APPROACH TO REVIVE THE DESTROYED “EGG BUILDING” THROUGH VR. Architecture and Planning Journal (APJ), 28(3), 17.

- Querrec, R., Taoum, J., Nakhal, B., & Bevacqua, E. (2018, November). Model for verbal interaction between an embodied tutor and a learner in virtual environments. In Proceedings of the 18th international conference on intelligent virtual agents (pp. 197-202).

- Nakhal, B., & Querrec, R. (2017, December). Cognitive embodied conversational agents in virtual learning environment. In 2017 29th International Conference on Microelectronics (ICM) (pp. 1-4). IEEE.

- Taoum, J., Nakhal, B., Bevacqua, E., & Querrec, R. (2016). A design proposition for interactive virtual tutors in an informed environment. In Intelligent Virtual Agents: 16th International Conference, IVA 2016, Los Angeles, CA, USA, September 20–23, 2016, Proceedings 16 (pp. 341-350). Springer International Publishing.

- Nakhal, B., Bevacqua, E., Said, B., & Querrec, R. (2016). Cognitive architecture for embodied conversational agent: Application on virtual learning environment. In EDULEARN16 Proceedings (pp. 4973-4983). IATED.

- Nakhal, B., Bevacqua, E., Said, B., & Querrec, R. (2016). Intelligent Embodied Conversational Agents in Virtual Environments for Learning. 22nd International Scientific Conference of LAAS (LAAS22), Beirut, Lebanon, April, 2016

- Nakhal, B., Bevacqua, E., Said, B., & Querrec, R. (2015). Intelligent Embodied Conversational Agents in Virtual Environments. 21st International Science Conference (LAAS21), Beirut, Lebanon, April, 2015

Projects

Web and Mobile Development:

- Developing many projects and their Content Management Systems using Software Engineering documentation resources, HTML5, CSS, JavaScript, PHP and MySQL, with JQuery, AJAX, JSON and bilingual abilities

- Supervising projects that are built with UML modelling tools, HTML5, CSS, JavaScript, PHP, MySQL, ReactJS, React Native, NodeJS, Django Python, MongoDB, Flutter, Firebase, WordPress

- Hosting and Web Mastering websites

Virtual Reality and Augmented Reality:

- Generation of Communicative Intentions for Virtual Agents in an Intelligent Virtual Environment:

Virtual Reality, Artificial Intelligence, Embodied Conversational Agents, Intelligent Virtual Environment, Vocal and Textual Communication Skills

- Immersive Marketing Virtual Touring:

Virtual tour application that can immerse and interact with users in a realistic virtual environment through several visual and interactive tools including augmented reality Head Mounted Displays

- Augmented Reality in Education:

Smart application that aims to minimize the contents of books, integrate various rich resources (images, videos, 3D objects, interactive capabilities…), gather all resources through a mobile application that runs on various mobile platforms (Android and iOS) with user friendly interface for students at all levels and ages

JAVA:

- Supervising Object-Oriented projects that are built using JavaFX and MySQL, such as Ticketing System, Bank System, University Management System

Supervising and reviewing various Thesis Projects and Research Fields:

- Artificial Intelligent (AI)
- Intrusion Detection System (IDS)
- Cybersecurity
- Virtual and Augmented Reality smart tools and games
- Metaverse
- Internet of Things (IoT)
- Federated Learning
- Blockchain
- Big Data and Data Science
- Distributed systems JAVA applications

PERSONAL SKILLS

Mother tongue(s): English, Arabic

Job-related skills:

- **Programming and Database Courses and Labs**: Object-Oriented Programming concepts, Advanced Programming, Algorithms, Databases, Operating Systems, Networking, UML modelling, JAVA, C, C++, C#, HTML5, XHTML, JavaScript, ReactJS, CSS3, PHP, SQL

- **Virtual Reality and Augmented Reality projects and technologies**: Unity3d projects, Meta-modelling Systems, NAO, Oculus, HTC VIVE, CAVE

- **Web Development**: Hosting websites developed using HTML5, XHTML, CSS3, JavaScript, ReactJS, Django Python, JQuery, XML, PHP and SQL Databases

- **Cybersecurity:** Blockchain, Federated Learning, IoT

- **Artificial Intelligence:** Role of AI in improving solutions in various fields

- **Online Tutoring, Administrating and Managing work:** Instructing live-courses through various Virtual Learning Environments with interactive pedagogical techniques, using: Microsoft Teams, Google Classroom, Google Meet, Google Sheets and Forms, ZOOM, Moodle, Linear, Discord, Figma, MIRO…)

REFERENCES

Prof. Ali El-Zaart
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Prof. Hussein El Ghor
Full professor at Lebanese University
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