Belal Ayyoub, Ph.D.

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Currently: Preparing the National Strategy for Artificial Intelligence in Jordan

INTRODUCTION

Dr. Belal has been an Associate Professor at the Faculty of Engineering Technology since 18 years ago, possesses excellent skills in teaching academic and technical courses, and although he is very much satisfied with his career and achievements made so far, yet he continuously seeks new challenges. Responsible for many large and significant IT projects in Jordan. A highly qualified professional, with practical experience in information system management and strong academic background. Experienced in setting objectives and managing resources and activities towards achieving the organization goals. And ability to organize workflow and follow-up. Managing large complex computer network projects, o Project estimation, monitoring, controlling, reporting, analyzing and managing the project execution and progress against time. Dr. Belal is also an active associate in Academic Team Activities, and collaborates closely with the Dean of Professional Studies. He outlined the specifications of the IT Center of Excellence, and contributed to successful numerous administrative hires and provided advice and guidance. Furthermore, he is responsible for reviewing the computer and network programs and providing academic recommendations. In addition, Dr. Belal is a member of subcommittees of Administration, Leadership and Student Services and Development.

Commercially, Dr. Belal has used SWOT analysis in developing a Regional Office business case for an international company, which helped in deciding on the feasibility of further investment fund requests in one of the local market projects.

Dr. Belal has extensive managerial and operational expertise, with advanced skills in strategic planning, product development, resource allocation, and market trend analysis and penetration.

Finally, Dr. Belal is considered as a spiritual father of volunteers in Jordan and has conducted many training workshops in the world of volunteering and social activities.

EDUCATION

2007-2009

Ph.D. Philosophy of Doctorate degree

Computer Information System (CIS)

"Computer Networks"

Arab Academy for Banking and Financial Sciences

1996-1999

M.Sc. **Master** of Science **degree**

Communication Networks

Arab Academy for Science and Technology and Maritime Transportations AAST&MT

1988-1995

B.Sc. Bachelor of Science in Engineering

"Electronic System Engineering"

Arab Academy for Science and Technology and Maritime Transportations AAST&MT

Academic Profile

Al-Balqa Applied University

Amman, Jordan

Feb 2002 – Present
ASSOCIATE PROFESSOR
Faculty Of Engineering Technology
Computer and Networks Engineering Department

Overview of Responsibilities

Teaching university courses, grading tests, giving assignments, preparing course curricula, and evaluating students. In addition, providing mentorship and career counseling in an attempt to bridge the gap between the outputs of the university and the private sector.
Furthermore, I managed to conduct research in several fields of knowledge and published my findings in professional journals.

Academic Courses Taught

1. Information security
2. Cyber security
3. CCNA security
4. Artificial Intelligence
5. Machine learning
6. Computer networks
7. Network Protocols
8. Advanced networks
9. Special topics in computer networks
10. Data transmission
11. Modeling& simulations
12. Analog communication
13. Digital Electronics
14. Computer skills
15. Introduction to IT
16. Input output devices
17. Digital Logic Design
18. Software engineering
19. Design and software analysis

Memberships

Computer Dept. Communities

1. AMAZON Coordinator
2. Social Community
3. Undergraduate Projects
4. Labs Community
5. Academic Courses Development

Professional Societies

1. WSEAS - World Scientific and Engineering Academy and Society
2. IEEE - Institute of Electrical and Electronics Engineers
3. IET - The Institution of Engineering and Technology

University's Computer Center

Successfully accomplished setting up the university's Computer Center, and being the manager in charge, I established the following new sub-departments: Multimedia, Research and Development, Networking and Operating Systems. Furthermore, I hired faculty and staff to support faculty development, technical education activities, and a large number of faculty

promotions and adjustments in the job market. In addition, I participated in critical technical discussions, and helped define the strategic plan behind the advancement of teaching and modern learning methodologies. Responsibilities also included the academic and administrative leadership and oversight of interdisciplinary and disciplinary programs in Computer Sciences, Communications and Networks, as well as departments major and minor programs, two graduate programs and adult degree programs in interdisciplinary studies. In addition, I managed personnel, curriculum, facilities, and approved strategic planning decisions.

Academic Profile – *Cont'd*

Arab Academy for Science and Technology (AAST)   Alexandria, Egypt

May 1992 – Oct 1999
ELECTRONICS LABORATORIES ENGINEER (TA)

Overview of Responsibilities
- Teaching theoretical and practical undergraduate courses.
- Curriculum development and materials writing.
- Practical topics instructor at the Electronics, Digital, and Measurements Labs.
- Teaching courses of Electronic Basics, Communications, and Digital Logic Gates.
- Setup and preparation procedures for various lab experiments associated with electronics.
- Designing and testing digital circuits.
- Electronics and Communications projects implementation.
- Providing laboratory assistance for graduation projects.
- Maintenance and repair of electronics laboratory equipment.
  Printed circuits board design of electronic system and control:. Examples: Foil rolling circuit, counting Circuits, auto power off reader voice switch control.

Courses attended

Ph.D.
- Advanced Topics in Computer Networks
- Advanced Topics in Security Systems
- Advanced Topics in Distributed Information Systems
- Advanced Topics in Data Mining
- Advanced Topics in Information Retrieval
- Advanced Topics in Multimedia and Image Processing
- Advanced Topics in E-Business
- Advanced Topics in Database
- Advanced Topics in Simulations and Modeling
- Advanced Topics in Knowledge Based Systems
- Advanced Topics in Software Engineering (Agile ,XP, Spiral, and others)

M.Sc.
- Modeling and Simulation
- Advanced Computational Techniques

- Stochastic and Markov Chains
- Seminar and communication skills
- Informatics
- Decision Theory DSS
- Inventory Control
- Integer and Non-Linear Programming

Research Papers

1. A proposed cloud based billers hub using secured e-payments system, TELKOMNIKA Telecommunication, Computing, Electronics and Control, Vol. 19, No. 1, February 2021, pp. 339~348, ISSN: 1693-6930, accredited First Grade by Kemenristekdikti, 10.12928/TELKOMNIKA.v19i1.15879
Belal Ayyoub, Bilal Zahran, Mahdi A. Nisirat, Farouq M. S. AL-Taweel, Mohammad Al Khawaldah

2. Acceptance paper in IEEE in Athens (Greece) the paper topic is:
"A New Model For A Complex Computer Network Reliability Design And Its Solution Using Trust Region Method." Advertised in 'software and hardware engineering for the 21'st century' book.

3. Acceptance paper in Journal '09UBCC (Ubiquitous Computing and Communication Journal) " RELIABILITY OPTIMIZATION USING ADAPTED ANT COLONY ALGORITHM UNDER CRITICALITY AND COST CONSTRAINTS.

4. B.Ayyoub "Wired and WLAN Optimal Design Using Opnet IT GURU", Contemporary Engineering Sciences, Vol 7, 2014 No. 6,263-272, HIKARI Ltd. ISSN 1313-6569

5. B.Ayyoub " A Smart Model For Web Programming Agile Testing", Global Journal Of Researches in Engineering (GJRE), (USA) Volume 14, Issue 2, 2014 , ISSN09755861

6. B.Ayyoub " System Reliability Design: A survey ", Global Journal Of Researches in Engineering (USA) Volume 14, Issue 2, 2014 , ISSN: 09755861

7. Telecommunication Systems with Multiple Access Based on Data Factorial Coding,
Jamil Al-Azzeh1, Belal Ayyoub1, Emil Faure2, Valerii Shvydkyi2, Oleksandr Kharin2, Artem Lavdanskyi2International Journal on Communications Antenna and Propagation (I.Re.C.A.P.), Vol. 10, N. 2, ISSN 2039 5086 April 2020 ,

8. a Novel zero-error method to create a secret tag for an image jamil al-azzeh, 2bilal zahran, 3ziad alqadi, 4belal ayyoub and 5mazen abu-zaherjournal of Theoretical and Applied Information Technology
15th July 2018. Vol.96. No 13 *International Journal of Computer Applications (0975 – 8887) Volume 179 – No.9, January 2018* 40

9. Suggested Method to Create Color Image Features Victor Belal Ayyoub, Jihad Nader, Ziad Al-qadi, Bilal Zahran *Journal of Engineering and Applied Sciences".*

10. Simulation-Based Comparative Study of Routing Protocols for Wired networks Belal Ayyoub*, Bilal Zahran*, Jihad Nader*, Jamil al Al-Azzah*, Ahmed Sharadqeh* *Journal of Engineering and Applied Sciences".*
Acceptance paper in IEEE in Athens (Greece) the paper topic is:

11. "A New Model For A Complex Computer Network Reliability Design And Its Solution
Using Trust Region Method." Advertised in 'software and hardware engineering for the 21'st century' book.

12. Acceptance paper in Journal '09UBCC (Ubiquitous Computing and Communication Journal) " reliability optimization using adapted ant colony algorithm under criticality and cost constraints.

13. B.Ayyoub "Wired and WLAN Optimal Design Using Opnet IT GURU", Contemporary Engineering Sciences, Vol 7, 2014 No. 6,263-272, HIKARI Ltd. ISSN 1313-6569

14. B.Ayyoub " A Smart Model For Web Programming Agile Testing", Global Journal Of Researches in Engineering (GJRE), (USA) Volume 14, Issue 2, 2014 , ISSN09755861

15. B.Zahran, B.Ayyoub,R.Abuzuniet,A.Sharadqeh, " Automated Blood Cells Extraction And Counting", International Journal of Computers and Technology ,Vol. 12, No. 9, 2014, ISSN 2277-3061

16. S.Hamed, B.Ayyoub, N.Alzabin, "Reliability Optimization of Complex Systems Using Genetic Algorithm Under Criticality Constraint" Springer Journal, 2010.

17. M.Al-Hunaity, M.Al-Hadidi, B.Ayyoub " A proposed Algorithm For Digital Watermarking " ,International Journal of Science and Technology (IJST), Vol.4, No.12 , 2012

18. R.Abuzneit, A.Abu jazar, B.Ayyoub, "Automatic Color Images Classification Algorithm", International Journal of Computer Science Issues (IJCSI), Vol. 9, Issue 2 No. 1, 2012

19. Z.Al-Asmar, B.Zahran, B.Ayyoub "A Comparison between English and Arabic Text Compression", Contemporary Engineering Sciences, Vol 6, 2013 No.3,263-272, HIKARI Ltd. ISSN 1313-6569.

20. Acceptance paper in ICIT 2009 The 4TH International Conference on Information Technology "A Model for System Reliability Optimization Problems Based on Ant colony Using Index of Criticality Constraint".

21. Acceptance paper in ICIT 2011 The 4th International Conference on Information Technology " Using Trained Matrix Technique For Acceptance Tests In Agility WEB Programming Methodologies ".

22. Accepted paper in International Journal of Computer Science ICJSI'2012 " Automatic Color Images Classification Algorithm

23. Jamil Al-Azzeh, Rashad Rasras, Ziad Alqadi3, Belal Ayyoub, Ahmad Sharadqh, " Adaptation of matlab K-means clustering function to create Color Image Features" International Journal of Research in Advanced Engineering and Technology ISSN: 2455-0876; Impact Factor: RJIF 5.4, Received: 15-01-2019; Accepted: 20-02-2019, Volume 5; Issue 2; April 2019; Page No. 10-18

24. Ahmad Sharadqh, Belal Ayyoub, Ziad Alqadi , Jamil Al-azzeh, "Experimental investigation of method used to remove salt and pepper noise from digital color image", International Journal of Research in Advanced Engineering and Technology, ISSN: 2455-0876; Impact Factor: RJIF 5.44, Volume 5; Issue 1; January 2019; Page No. 23-31

25. Ziad Alqadi; Bilal Zahran; Qazem Jaber; Belal Ayyoub; Jamil Al-Azzeh; Ahmad Sharadqh, "Proposed Implementation Method to Improve LSB Efficiency" International Journal of Computer Science and Mobile Computing, Vol.8 Issue.3, March- 2019, pg. 306-319© 2019, IJCSMC All Rights Reserved 306 ,ISSN 2320–088X ,IJCSMC, Vol. 8, Issue. 3, March 2019, pg.306 – 319

26. Two Suggested Probabilistic and Kinetic Models for Astrocytic Network in Spiking Neural Networks, International Journal of Advanced Trends in Computer Science and Engineering, Bassam Abed1, Belal Ayyoub2, Amelia RitahaniIsmail3 , Normaziah Abdul azizi4Bassam Subaih

27. A Proposed Mathematical Model for Tripartite Synapse to Enhance Artificial Model for Artificial Neuron-Astrocyte Networks, International Journal of Advanced Trends in Computer Science and Engineering

28. Telecommunication Systems with Multiple Access Based on Data Factorial Coding, International Journal on Communications Antenna and Propagation., Jamil Al-Azzeh1, Belal Ayyoub1, Emil Faure2, Valerii Shvydkyi2,Oleksandr Kharin2, Artem Lavdanskyi2

Professional Experience

One Global   Amman, Jordan

Jan 2012 – Jan 2019

COUNTRY MANAGER

A highly qualified professional, with extensive hands-on experience in information system management and strong academic background. Experienced in setting objectives and managing resources and activities towards achieving the organization goals. Possesses strong leadership skills, outstanding interpersonal and communication skills and ability to work effectively in dynamic environments.

Overview of Responsibilities

- Directed the allocation of financial and personnel resources to optimize branch operations.
- Formulated strategies to improve branch performance.
- Emphasized customer service training.
- Spearheaded proposals preparation in support of sales personnel.

Detailed Achievements and Duties

- Over 7 years of experience in multiple roles to include technical roles in numerous and diverse projects, participation in many Pre-Sales activities and client workshops inside and outside of Jordan, support of networks infrastructure, business and software development and leading teams through technical guidance and training.
- Specific roles played included:
    - e-Solutions Dept. Manager
    - Enterprise Architect
    - Software Designer
    - Technical Lead
    - Operation Developer
    - HR Mentor
    - Project Manager
    - Technology Instructor
    - Pre-sales Support Consultant
- Experienced in Multiple Software Development Methodologies.
- Applied and made further use of software development methodologies.
- Managed to devise and optimize methodologies for specific e-Payment projects types and client circumstances.
- Equipped with outstanding capabilities and knowledge in IT Strategic Planning.
- Defined the IT Strategy for multiple organizations.
- Successfully managed the full lifecycle of key software products to include: mPoss Solution, Og Money (Consumer and Business Solutions), and Og Fwatiri Solution (billers hub, integrating with eFawatercom – Central Bank of Jordan).
- Established the vision and strategic objectives of the company and approved policies and procedures.
- Authorized and organized the establishment of major departments and associated senior staff positions.
- Allocated funds to implement organizational policies and programs; establish financial and administrative controls; formulate and approve promotion and marketing campaigns; and approve the overall IT HR planning.

Professional Experience – *Cont'd*

- Spearheaded and approved the selection of the middle managers; directors and executive staff.
- Coordinated the work regions, divisions and departments.
- Planned and directed the operations of information systems, electronic data processing departments, and companies in relationship with One Global.
- Developed and implemented policies and procedures for the electronic data processing and computer systems operations and development.
- Met with clients to discuss data processing system requirements and specifications.
- Analyzed information system requirements and performance and developed and implemented new and modified systems.
- Recruited and supervised computer analysts, programmers and other personnel and oversaw their professional development and training.
- Reviewed, developed and approved the company contracts, designs, agreements and project management plans related to the technology, information, infrastructures, operations, solutions development and IT vendor business relationships.
- Responsible for many large and significant IT projects in Jordan.

- Managed large complex projects.
- led teams in multicultural environments.
- Setup a new IT Department, and motivated and managed staff.
- Defined and implemented the company's Strategy.
- Supervised, trained and evaluated the performance of employees while organizing, prioritizing, and scheduling work assignments to foster a cooperative work environment.
- Organized and translated diverse business requirements into technical solutions.
- Supervised the development of an action plan by technical managers to implement the company's strategic plan.
- Defined and assigned duties to middle management staff based on their qualifications, responsibilities and job descriptions, and in line with the organizational structure.
- Managed the day-to-day administrative and financial activities for the company as well as the support functions in coordination with technical managers.
- Managed to get a license from CBJ the Cloud-Based Biller Hub (CBBH), which was meant to provide a cloud-based service that enables billers to become integrated with eFAWATEERcom in a standard and loosely-coupled manner, without direct technical involvement of eFAWATEERcom.
- Successfully prepared all the documents needed to get the CBJ license to include:
    o Technical Proposal - Cloud-Based Billers Hub
    o Information Security Policy
    o Risks and Reasons
    o Cybersecurity Awareness
    o Administrative Efficiency and Operating Issues
    o Call Center and Customer Support
    o Contract and Agreements between Billers and Biller Aggregator.
    o Business and Marketing Plan.
- Developed biller's aggregator project solution, which integrates between various types of billers and eFAWATEERcom (as the primary bank/PSP hub e-payments).
- Played the role of Project Manager in a project for AUDI Bank that provided a local and international payment gateway between Jordan, Lebanon and Kuwait for Og money mobile US $ payment platform.
- Played the role of Project Manager in a project for Al-Ahli Bank, provided Payment Gateway Integration Methods for clients to pay using Mobile App.
- Managed the following Vertical Og business lines: Og Money, Og Play, and Og business.

Professional Experience – *Cont'd*

Specialized Technical Services Company (STS)   Amman, Jordan

1999
COMPUTER NETWORKS TEAM LEADER AND PROJECTS MANAGER

Detailed Job Responsibilities
- Managed computer networks projects, and performed system engineering in heterogeneous networks (Giga speed, Fast Ethernet, FDDI, Token Ring and ATM).
- Led Internet setup design and implementation for large corporations.
- Setup ISP environments including network infrastructure, routing design and optimization, layer 2 and layer 3 switches, and remote access solutions.
- Performed structural cabling system works (UTP, Fiber cabling, outlets, patch panel termination, labeling and cable management).

- Successfully managed the implementation of the following projects:
  - Upgrading Al-Yarmouk University computer network from FDDI network to Giga speed. I reconstructed the infra structure with all layer 3 and routers configuration and management (2000+ workstations).
  - Al-Balqa'a University (12 colleges) computer network design and testing project. All the high educational colleges geographically disconnected were linked to each other through a private Wide Area Network (WAN), in addition to the implementation of internal network for each college.
  - King Abdullah Hospital network. Implemented the network infrastructure and interconnected the campus network with indoor and outdoor, single mode and multi-mode fiber cables (1700+ Nodes).
  - A project where I installed 200km of armored fiber cables with its all joints and splices using closures and Fusion Splicer equipment and tools.
  - The Income Tax branches with required infrastructure and all the management needed for the establishment and setup of connections between branches over private WAN.
- Implemented several other vital networking projects such as Jordan University, Potas company, Ministry of Foreign Affairs, Farming Authorities, and others.
- Handled regional Routers reconfiguration and tuning.
- Designed and installed enterprise data networks with major vendors like CISCO, Nortel, Avaya and 3COM.
- Designed, installed and configured LAN, WAN and VoIP networks.
- Designed, installed and configured structural cabling systems with major vendors like Avaya, IBM and Alcatel.
- Maintained and troubleshooted LANs, PCs, and various peripherals in a network.
- Delivered successful customer presentations.
- Co-coordinated with the ISP for troubleshooting and reconfiguration matters.
- Upgraded images of network equipment.
- Monitored networks performance.
- Configured VLANS on Layer II switches.
- Managed the TCP/IP network for several sites.
- Configured Nortel Routers for WAN connections.
- Troubleshooted the Internet setup and assured stability of connections.
- Established a remote connection between remote sites using Nortel Routers and tested the dial on demand feature.
- Designed, supervised and implemented the computer network for Al-Quds College.

Professional Experience – *Cont'd*

Al-Khawarezmy Training Center   Amman, Jordan

CO-FOUNDER & INSTRUCTOR
Established and co-founded the training center.

NewHorizons International Center   Amman, Jordan

2009
CISCO INSTRUCTOR
Teaching CCNA and CCNP courses.

ACIT for Training and Consultancy   Amman, Jordan

CO-FOUNDER & CONSULTANT
Co-founded the company and provided consultancy services in following fields:

- Professional Training.
- Network Security Consultation.
- Information Mobility Consultation.
- Database Distributed System Consultation.

Other Experiences

- Experienced Life Coach with 14+ years of experience partnering with clients, developing positive practices, and offering general guidance.
- Skilled in counseling clients in issues such as career development, love and relationships, health and wellbeing, and positive living.
- Previously worked with clients ranging in age from 14 to 45 and implemented various positive approach principles that were supportively received and recommended for implementation throughout organizations.
- Managed to successfully improve clients retention rate during the time spent working for companies and different organizations.
- Experienced in setting objectives and managing resources and activities towards achieving the organization goals.
- Distinguished ability to organize workflow and follow-up.
- Delivered several courses such as Teamwork, Time Management and Communication Skills.

Training Courses

- Developing World Class Strategic Leaders
- Strategic Planning
- CCNA Certification + Cisco Instructor: Legal Main Contact Cisco equipment manager, registrar for Cisco academy in Al-Balqa University to teach Cisco courses (CCNA Exploration, CCNA Discovery, IT Essentials, CCNP, CCNA v4.0, CCNP, Wireless, Voice Security and Design)
- Managing Mobile Application projects
- Software Engineering courses
- Project managing Using CPM
- Network +
- Fiber installation and termination in Corning
- NNSS certification : Support specialist in Nortel networks products
- Project management course (ALEX. UNIV)
- NT course (ALEX)
- TCP/IP course (AMMAN)
- Router configuration (Dubai)
- Quality assurance course (Egypt)
- Maintenance electrical equipment courses
- Self-build and motivated course
- Team building course
- Communication skills
- Time management
- TOT
- Business Planning Sales and Presales activities
- Training and certification
- Software Applications Development
- International Relationships
- Professional systems/solutions analysis Evaluation and valuation
- Tenders & Proposals Management.
- Process development and management.
- Complex and basic policies & procedures

Social Activities

Public Lectures and Workshops for Community Service

- Proficient in motivating and inspiring clients and teams.
    - Strong motivation to help others succeed and do well.
    - Knowledgeable in various theories of leadership and management.
    - Optimal time management and productivity.
- Partner with clients to identify and achieve goals for life betterment and personal improvement over a period of time.
- Maintain professional relationship with clients wherein goals are attained, and obstacles are discussed without reservation.
- Help clients improve general outlook on life, including self-esteem, optimism, and willfulness to pursue goals consistently.

- Partnered with corporate clients to identify areas of leadership that may be improved through shifted processes.
- Consulted with management to understand leadership principles and develop more productive leadership concepts to be implemented.
- Worked with unemployed and job seeking clients to identify an ideal career and seek out positions that may fit.
- Developed general job skills with clients, including interviewing techniques, career principles, and confidence.
  Partnered with clients to help them better understand their ultimate goals for their careers and the rest of their lives.

Volunteering Skills

Highly committed and dedicated Volunteer with a strong spiritual service record and an extraordinary work ethic. Able to motivate small and large volunteer groups for fundraising, charity work, and a variety of community outreach efforts. Adept at researching and taking full advantage of grant opportunities for NGO mission and activity expansion. Broad NGO volunteering and ethics service experience Strong skills in fundraising personally High degree of personal commitment Excellent grasp of principles and practices Exceptional familiarity with organization management principles. Superior teamwork and independent achievement abilities Sound skills in coordinating with other volunteers and supervisors, member with over 20 NGO. Working in Jordan charities to help poverty-stricken communities to get food, clothing and clean water...etc. Receiving, handling and distributing aid supplies to villages, working on food parcels.

Personal Qualifications

- Able to work under pressure, for long hours.
- Excellent in seminars.
- Outstanding communication skills.
- Proactive and persuasive.
- Well-exposed to wide spectrum of technical and business topics.
- Open-minded.
- Preparing exhibitions.
- Motivated, self-starter, fast learner and hard worker.