

OSAMA AL BAIK

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KEY SKILLS AND ACHEIVEMENTS

- Successfully invented, designed, and deployed a practical methodology, based on Lean principles, agile techniques, and Validation Design to overcome dominant problems in the software development industry.
- Has introduced the newest continuous improvement methods to IT operations, including Kanban and Kaizen.
- Successfully managed large, complex, and cross-functional enterprise projects from inception to completion.
- Implemented critical changes in different settings resulting in hundreds of thousands in operational savings.
- Supervised and led, multi-millions and multi-years, improvement initiatives and achieved beyond expectations.
- Was one of the key resources to establishing the Project Management Office (PMO) at University of Alberta.
- Has been named the instructor with highest volunteering hours to help students outside classroom.
- Has been named the instructor with a record number of students attending tutoring session outside the classroom (200 attendees in each single session)

EDUCATION

University of Texas at Austin, Texas, USA *Dec 2020 – Nov 2023*
Post-Graduate Diploma in Artificial Intelligence and Machine Learning

University of Alberta, Edmonton, AB, Canada *Sep 2011 - Sep 2017*
Doctor of Philosophy (Ph.D.) in Software Engineering & Intelligent Systems,
Rated excellent with honour

Villanova University, Villanova, PA, USA *Aug 2015 - Nov 2016*
Advanced Master Certification in Lean Six Sigma Black Belt

DePaul University, Chicago, ILL, USA *Sep 2005 - Mar 2007*
Master of Science, majoring in Software Engineering with a concentration on
Project Management, graduated with Distinction

Amman ALAhleyya University, Salt, Jordan *Feb 2002 - Jul 2005.*
Bachelor of Science in Computer Information Systems, graduated with Distinction

SELECT PROFESSIONAL CERTIFICATIONS

- 1) **AIMA**: Artificial Intelligence Maturity Assessor, IAIDL, USA. **Active**, April 2021
- 2) **CMBB**: Certified lean six sigma master black belt Villanova University, USA. **Active**, Aug 2016
- 3) **ITIL**: Certified ITIL Foundation in IT Service Management, Utrecht, Netherland. **Active**, Jan 2013
- 4) **PMP**: Certified Project Management Professional by the PMI, PA, USA. **Active**, since Mar 2011
- 5) **CPM**: Certified Project Manager by IAPPM, NJ, USA. Status: **Active**, since May 2007

WORK EXPERIENCE IN TRAINING & ACADEMIA

Al-Ahliyya Amman University, Amman, Jordan

Assistant Professor,

Oct 2023 – Sep 2024

- Instruct undergraduate-level courses in Software Engineering (SE) and oversee the progression of Capstone projects.
- Assess and appraise the academic endeavors of students, including class participation, assignments, and written submissions.
- Foster and guide interactive discussion within the classroom setting.
- Develop comprehensive educational resources encompassing syllabi, assignments, and supplementary materials.
- Facilitate open dialogue and constructive engagement among students.
- Maintain consistent office hours to offer guidance and support to students.
- Contribute expertise and insights to various academic and administrative panels, addressing institutional policies and departmental affairs, including program accreditation by domestic and international institutions.

Applied Science Private University, Amman, Jordan

Assistant Professor,

Mar 2022 – Mar 2023

- Teach undergraduate-level CIS courses and supervise Capstone projects.
- Evaluate and grade students' class work, assignments, and papers.
- Initiate, facilitate, and moderate classroom discussions.
- Prepare course materials such as syllabi, homework assignments, and handouts.
- Initiate, facilitate, and moderate classroom discussions.
- Prepare course materials such as syllabi, homework assignments, and handouts.
- Maintain regularly scheduled office hours to advise and assist students.
- Serve on academic and administrative committees that deal with institutional policies, departmental matters, and academic issues.
- Leading multiple committees such as Capstone Projects Committee, Public Relations and Production Committee.

Higher Colleges of Technology, Abu Dhabi, UAE

CIS Lecturer,

Aug 2019 – July 2021

- Teach undergraduate-level CIS courses and supervise Capstone projects.
- Evaluate and grade students' class work, assignments, and papers.
- Initiate, facilitate, and moderate classroom discussions.
- Prepare course materials such as syllabi, homework assignments, and handouts.
- Keep abreast of developments in the field by reviewing current literature, participating in professional association forums, attending conferences, and publishing articles.
- Maintain student attendance records, grades, and other required records by the University, accreditation agencies, and the Ministry of Higher Education.
- Plan, evaluate, and revise curricula, course contents, and methods of instruction.
- Collaborate with members of the business community to improve programs, to develop new programs, to build relationships, and to provide student access to learning opportunities such as internships.

LEANOVEERING®, EDMONTON, AB, CANADA

CEO & Lead Coach,

Apr 2016 – Aug 2019

As the Lead Coach

- Developed Training proposals in accordance with government Request for Proposal guidelines.
- Prepared course materials such as case studies, context-specific examples and incorporate them to the materials to ensure the course timelines, integrity, and accreditation is not negatively impacted.
- Planned, evaluated, and revised curricula, course content, and course materials and methods of instruction.

- Collaborated with government entities at all levels, Federal, Provincial, and Municipal, and the designated staff to address any training, coaching, or consulting issues.
- Collaborated with the government entities, the trainees, and evaluators to improve programs, to develop new programs, to build custom programs, and to enhance and improve the service offerings.
- Prepared and delivered Black Belt and higher-level courses, when required.
- Participated in evaluating the trainees' project work (if required for Green Belt and Higher-level courses)
- Prepared and delivered training modules and or workshops to the government entities, private businesses, and charitable organizations on topics related to Lean Management, Program and Project Management, System Analysis and Design, Management Information Systems, Operations Management, Knowledge Management, and Organization Behavior.

UNIVERSITY OF ALBERTA, EDMONTON, AB, CANADA

Teaching Assistant,

Apr 2012 – Aug 2017

- Organized reference materials, visual aids and other materials as required for lectures
- Conducted seminars, discussion groups and laboratory sessions to supplement lectures
- Assisted in the preparation and administration of examinations
- Graded examinations, term papers and laboratory reports.
- Conducted literature reviews, surveys, experiments and other research for use in scholarly publications.
- Compiled research results and performed the analysis of results and the preparation of journal articles.

AL YAMAMAH UNIVERSITY, RIYADH, SAUDI ARABIA

Director of Academic Affairs,

Sep 2007 – Aug 2011

- Recruited, hired, trained, and supervised departmental personnel.
- Directed, coordinated, and evaluated the activities of personnel, including support staff, and engaged in administering academic institutions, departments and alumni organizations.
- Represented the institution, at community and campus events, during meetings with other institution personnel, and during accreditation processes.
- Promoted the university by participating in the community, state, and national events or meetings, and by developing partnerships with industry and secondary education institutions.
- Appointed individuals to faculty positions and evaluated their performance.
- Directed activities of administrative departments such as admissions, registration, and career services
- Developed curricula, and recommended curricula revisions and additions.
- Determined course schedules, and coordinated teaching assignments and room assignments to ensure optimum use of buildings and equipment.
- Appointed as the Chair of Faculty Recruitment (FRC), which was responsible for hiring competent faculty members in both programs, Business Administration and Computing and Information Technology
- Chairman of the Course Transfer Committee (CTC), which was evaluating the courses for the transferred students from other domestic and international universities.
- Developed the study plan for the Bridging Business Administration students who have a diploma degree and intending to pursue a Bachelor in Business Administration. (Evening Program)

IT/MIS Faculty Member,

Sep 2007 – Aug 2011

- Evaluated and graded students' class work, assignments, and papers.
- Prepared and delivered lectures to undergraduate students on topics such as E-commerce, System Analysis and Design, Management Information Systems, Principles of Management, Operations Management, and Organization Behavior.

- Prepared course materials such as syllabi, homework assignments, and handouts.
- Kept abreast of developments in the field by reading current literature, talking with colleagues, participating in professional association forums, and attending conferences.
- Maintained student attendance records, grades, and other required records by the University, accreditation agencies, and the Ministry of Higher Education.
- Planned, evaluated, and revised curricula, course content, and course materials and methods of instruction.
- Maintained regularly scheduled office hours to advise and assist students.
- Collaborated with colleagues to address teaching and research issues.

PROFESSIONAL WORK EXPERIENCE

LEANOVEERING®, EDMONTON, AB, CANADA

*CEO and Lead Coach,
As the CEO:*

Apr 2016 – Aug 2019

- Established and implemented departmental policies, goals, objectives, and procedures, conferring with board members, organization officials, and staff members as necessary.
- Explored, researched and built strong relationships with business partners, and represented management in agreement and contract negotiations and execution.
- Determined goods and service offerings, and set pricing strategies and credit terms, based on contracts' conditions and forecasts of customer demand.
- Determined staffing requirements, interviewed, hired and trained new employees, and oversaw personnel processes afterwards.
- Built job fact sheets, managed staff, prepared work schedules and assigned specific duties.
- Directed and coordinated organization's financial and budget activities to fund operations, maximize investments and increase efficiency.
- Developed and implemented marketing strategies, including advertising campaigns and sales plans.
- Located, selected, and procured merchandise for resale, representing management in procurement negotiations.
- Directed and coordinated activities of businesses units and teams concerned with the production, pricing, sales, and distribution of products and services.
- Provided leadership for employee relations through effective communications, coaching, training, and development
- Reviewed financial statements, sales and activity reports, and other performance data to measure productivity and goal achievement, which helped in identifying areas needing cost reduction and program improvements.

UNIVERSITY OF ALBERTA, EDMONTON, AB, CANADA

*Sr. Project Management Lead - Information Services & Technology (IST), Apr 2012 – Feb 2016
(Feb 2016 – Mar 2018 on a part-time basis – To complete multi-year/multi-million program)*

- Developed and maintained project plans for information technology projects, including information such as project objectives, technologies, systems, information specifications, schedules, funding, and staffing.
- Managed project execution to ensure adherence to budget, schedule, and scope.
- Prepared project status reports by collecting, analyzing, and summarizing information and trends.
- Assigned duties, responsibilities, and spans of authority to project personnel.
- Developed and managed annual budgets for information technology projects.
- Developed implementation plans, including analyses such as cost-benefit and return on investment (ROI).
- Established and executed various project plans, such as a project communication, and project training plans.

- Identified, reviewed, and selected vendors or consultants to meet project needs based on systematic RFP and competitive bidding processes.
- Initiated, reviewed, or approved modifications to project plans.
- Negotiated with project stakeholders, including external vendors and suppliers to obtain resources and materials.
- Conferred with project personnel to identify and resolve problems.
- Performed risk assessments to develop response strategies by Identifying, tracking and implement strategies to manage risks; maintain accurate risk-tracking document; and escalated issues when necessary to minimize the impact on scope, budget, timelines and quality
- Communicated progress and issues to stakeholders and managed all client relationships.
- Provided project status updates to the clients, teams, and the steering committee.
- Managed and supervised team members and external project resources on a daily basis.
- Ensured status reports on project tasks and action items to ensure adherence to quality standards.

CROSSROADS CONSULTING & DEVELOPMENT, RIYADH, SAUDI ARABIA

General Manager,

Jun 2010 – Aug 2011

- Established and implemented departmental policies, goals, objectives, and procedures, conferring with board members, organization officials, and staff members as necessary.
- Explored, researched and built strong relationships with business partners and represented management in agreement and contract negotiations and execution.
- Determined goods and services to be sold, and set pricing strategies and credit terms, based on contracts' conditions and forecasts of customer demand.
- Determined staffing requirements, interviewed, hired and trained new employees, and oversaw personnel processes afterwards.
- Built job fact sheets, Managed staff, prepared work schedules and assigned specific duties.
- Directed and coordinated the organization's financial and budget activities to fund operations, maximize investments and increase efficiency.
- Directed and coordinated activities of businesses units and teams concerned with the production, pricing, sales, and distribution of products and services.

MODERN MANAGERS CONSULTING, AMMAN, JORDAN

Project Management Consultant,

Sep 2005 – Aug 2007

- Developed and managed work breakdown structure (WBS) of information technology projects.
- Developed and updated project plans for information technology projects including information such as project objectives, technologies, systems, information specifications, schedules, funding, and staffing.
- Managed project execution to ensure adherence to budget, schedule, and scope.
- Prepared project status reports by collecting, analyzing, and summarizing information and trends.
- Developed implementation plans that included analyses such as cost-benefit and ROI.
- Established and executed a project communication plan.
- Initiated, reviewed, and approved modifications to project plans.
- Monitored and tracked project milestones and deliverables.
- Scheduled and facilitated meetings related to information technology projects.

Publications & Conferences

- 1) Al-Baik, Osama, et al. “CheXrayNet: An Optimized AlexNet for Chest X-Ray Analysis of Respiratory Disease Diagnosis”. The International Arab Journal of Information Technology (*Under review*)
- 2) Abu Alhija, Mwaffaq, Al-Baik, Osama, Ahmad, Ovais. “Organizational Debt – Roadblock to Agility in Software

Engineering: Exploring an Emerging Concept and Future Research for Software Excellence”. PLOS ONE (Under Review)

- 3) Abu Alhija, Mwaffaq, Al-Baik, Osama, Hussein, Abdelrahman, Abdeljaber, Hikmat. “Optimizing Blockchain for Healthcare IoT: A Practical Guide to Navigating Scalability, Privacy, and Efficiency Trade-offs”. The Indonesian Journal of Electrical Engineering and Computer Science. (Accepted. In print)
- 4) Al-Baik, Osama, et al. "Frilled Lizard Optimization: A Novel Nature-Inspired Metaheuristic Algorithm for Solving Optimization Problems" *Computers, Materials & Continua*. (Accepted. In print)
- 5) Ahmad, Ovais, Al-Baik, Osama. “Beyond Technical Debt Unravelling Organisational Debt Concept”. Proceedings of the 39th ACM/SIGAPP Symposium On Applied Computing. Avail, Spain, April, 2024 (DOI: 10.1145/3605098.3635913)
- 6) Al-Baik, Osama, et al. "Pufferfish Optimization Algorithm: A New Bio-Inspired Metaheuristic Algorithm for Solving Optimization Problems." *Biomimetics* 9.2 (2024): 65.
- 7) Tamimi, Hatem, Abuamara, Fadi, and Al-Baik, Osama. “Utilization of 3D Printing Technology: UAE Case Study." In 2021 8th International Conference on “Computing for Sustainable Global Development”. IEEE, Conference ID: 51348, 2021.
- 8) Al-Baik, Osama et al,. "Towards A Lean Innovative Approach to Rethinking Employees Turnover. Surviving with Less-Knowledge, but not Knowledge-less: A Case Study." Proceedings of the 53rd Hawaii International Conference on System Sciences. 2020.
- 9) Al-Baik, Osama, and James Miller. "Integrative Double Kaizen Loop (IDKL): Towards a Culture of Continuous Learning and Sustainable Improvements for Software Organizations." *IEEE Transactions on Software Engineering* 45.12 (2018): 1189-1210.
- 10) Al-Baik, Osama, James Miller, and Daniel Greening. "Towards an Innovative Validation- Driven Approach to Lean Product Development." Proceedings of the 50th Hawaii International Conference on System Sciences. 2017.
- 11) Al-Baik, Osama, and James Miller. "Kaizen cookbook: The success recipe for continuous learning and improvements." 2016 49th Hawaii International Conference on System Sciences (HICSS). IEEE, 2016.
- 12) Al-Baik, Osama, and James Miller. "The kanban approach, between agility and leanness: a systematic review." *Empirical Software Engineering* 20.6 (2015): 1861-1897.
- 13) Al-Baik, Osama, and James Miller. "Waste identification and elimination in information technology organizations." *Empirical Software Engineering* 19.6 (2014): 2019-2061.

AWARDS AND HONORS

- Natural Sciences and Engineering Research Council (NSERC), Collaborative Research & Development CRD 468364-2014, entitled “Validation Driven Software Product Development”. 2014 -2016. Value: \$150,000
- Natural Sciences and Engineering Research Council (NSERC), Engage Grant, EGP 453355-2013: entitled "Experiments with a Lean-based product development process". 2013-2014. Value: \$50,000
- Certificate of Appreciation by Microsoft for establishing and managing the Microsoft Innovation Centre in the Middle-east, and for managing the MSDN translation program.
- Invited honorary member of several international societies and has been guest speaker in many international conferences. Currently, sits on the editorial board of the American Academic Journal for Information Systems and is a reviewer with IEEE.

REFERENCES

References will be supplied upon request.