Mamdouh Alenezi
Transformative Learning Strategist

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Profile

Technology governance and AI leader with deep experience shaping strategy, raising organizational maturity, and driving complex digital transformation at scale. In my roles as Acting Director of Technology Governance and Director of the AI Academy at Tahakom, I lead enterprise architecture modernization, AI and IT strategic planning, and governance reform to align technology investments with national digital goals. I developed and institutionalized the PMO playbook, executed governance audits and roadmaps, and strengthened enterprise architecture and SDLC practices by embedding CMMI-aligned controls, streamlined policies, and ISO-based quality frameworks. These efforts improved delivery performance, decision transparency, and value realization across the sector. I modernized the delivery ecosystem through CI/CD-enabled DevOps, launched AI townhalls and capability-building programs, and expanded academia-industry research partnerships to accelerate R&D in smart mobility and public safety. Known for clear direction, analytical depth, and a practical leadership style, I build high-performing teams and enable the adoption of responsible, high-impact AI solutions.

Education

Prosci® Certified Change Practitioner *Prosci*   **Online** *18-20 November 2025*
Keywords: Change Management, ADKAR, Organizational Transformation.

Learning Track (Specialization in Strategy) *Harvard Business School Online*   **Online** *July-October 2024*
Courses: Strategy Execution, Sustainable Business Strategy, Disruptive Strategy.

Ph.D. in Software Engineering *North Dakota State University*   **Fargo, ND** *2011-2014*
Thesis: "A New Coupling Metric: Combining Structural and Semantic Relationships".

M.S. in Software Engineering *DePaul University*   **Chicago, IL** *2010-2011*
Relevant Courses: Requirements Engineering, Software Design and Architecture, Project Management, OO Design Patterns, Software Testing and Quality Assurance.

B.S. Computer Science *Prince Sultan University*   **Riyadh, KSA** *2005-2010*
Relevant Courses: Software Engineering, Advanced Software Engineering, and Internet Security and Firewalls.

Areas of Expertise

Software Engineering – Digital Transformation – Digital Strategy – Strategic Planning – Consultation – Data Management and Governance - Quality Management – Educational Innovation – Digital Entrepreneurship – Institutional Excellence

Consultancy and Funding Experience

Strategic Planning Consultant, *(CYBEXPSU)*   **Riyadh, KSA** *11/2023 - Present*
- Provided expert guidance on the selection and implementation of various strategic planning methodologies, tailoring approaches to align with organizational goals and objectives
- Successfully led and executed multiple workshops with diverse stakeholders, effectively gathering and analyzing input to inform strategic direction
- Conducted comprehensive research and documentation of full strategies, encompassing vision, mission, goals, and initiatives, to ensure thorough understanding and alignment across all levels of the organization

Software Engineering Consultant, *(PSDSARC)*   **Riyadh, KSA** *02/2023 - 02/2024*
- Provided technical expertise and consulting services focusing on software engineering and related technologies
- Collaborated with teams to develop and implement software solutions that supported their research and analysis efforts, improving the efficiency and effectiveness of their work
- Identified and recommended new technologies and methodologies that could enhance the center's research and analysis capabilities, and assisted in the implementation of these solutions

Software Engineering Consultant, *(Software Development Company)*   **Riyadh, KSA** *06/2018 - 10/2018*
- Implemented a software process improvement initiative to enhance efficiency and productivity in software development
- Conducted a thorough analysis of existing development processes to identify areas for optimization and streamlining
- Introduced new tools and methodologies to improve the speed and quality of software development, resulting in increased customer satisfaction and reduced time-to-market

Research Fund, *(KACST)*   **Riyadh, KSA** *01/2017 - 12/2018*
- Designed and implemented a dynamic capacity provisioning system for a cloud-based network
- Developed a scalable and flexible architecture that allows for automatic adjustment of network resources in response to changing traffic patterns and demand
- Implemented machine learning algorithms to optimize network performance and minimize resource waste, resulting in improved network efficiency and reduced operational costs

Data Science Consultant, *(Major Saudi Telecom Company)*   **Riyadh, KSA** *01/2016 - 09/2016*
- Led a project team to identify and address the root causes of a high percentage of repeated tickets in the customer service department
- Conducted thorough analysis of customer service data and ticketing patterns to identify trends and areas for improvement
- Developed and implemented a plan to address the identified issues, resulting in a significant reduction in repeated tickets and improved customer satisfaction

Software Engineering Consultant, *(NISC)*   **Saint Louis, MO** *01/2013 - 05/2013*
- Led a project team to transform the billing management system of Walmart, a large retail company, from a traditional client-server architecture to a web service
- Designed and implemented a web-based platform that enables efficient and secure billing processes, improving the overall customer experience and reducing operational costs
- Collaborated with cross-functional teams, including software developers, system administrators, and business stakeholders, to ensure a successful migration and minimize disruption to business operations

Software Engineering Consultant, *(Wisconsin Falconers Association)*   **Appleton, WI** *08/2010 - 02/2011*
- Designed and developed a web-based reservation system allowing visitors to easily book and manage their visits to the association's facilities
- Implemented user-friendly interface and features, such as real-time availability and scheduling, to provide an intuitive and efficient booking experience for users
- Integrated payment processing and confirmation systems to ensure seamless and secure transactions, and minimize the need for manual intervention and administrative tasks

Academic Ranks

- Full Professor of Software Engineering, Prince Sultan University, Riyadh, KSA   (2022 – Present)
- Associate Professor of Software Engineering, Prince Sultan University, Riyadh, KSA   (2018 – 2022)
- Assistant Professor of Software Engineering, Prince Sultan University, Riyadh, KSA   (2014 – 2018)

Professional Experience

AI Academy Director/Technology Governance Director *(Tahakom)*   **Riyadh, KSA** *08/2024 - Now*
- Developed and institutionalized a PMO playbook to streamline the project lifecycle and governance, conducted audits and assessments, and produced roadmaps to ensure full realization of project value and adherence to best practices.
- Elevated enterprise architecture maturity and clarified the governance framework to align technology investments with strategic objectives and digital transformation goals.
- Revamped policies, processes, and the SDLC to ensure operational excellence, introducing CMMI-aligned quality controls and measurable maturity improvements.
- Modernized the toolchain and delivery pipeline by implementing CI/CD-enabled DevOps practices, improving delivery speed, traceability, and software quality.
- Built sustained AI capability and research ecosystems through enterprise training programs, competency-based certifications, regular AI townhalls, and strengthened academia–industry partnerships that embed ISO-compliant standards into smart-mobility and public-safety solutions.

Founding Dean of College of Space and Aviation Sciences, *(PSU)*   **Riyadh, KSA** *04/2024 - 08/2024*

Dean of Quality Assurance and Development, *(PSU)*   **Riyadh, KSA** *09/2020 - 08/2024*

- Spearheaded the development and implementation of quality assurance frameworks, resulting in the successful attainment of ISO certifications and accreditation for the institution.

- Fostered a culture of excellence in teaching and learning through the Teaching and Learning Center, enhancing faculty development and academic advancements across the campus.

- Developed and implemented a robust Quality Management System, ensuring continuous improvement and excellence in all aspects of the institution.

- Improved institutional effectiveness through the development and implementation of comprehensive assessment and evaluation frameworks, ensuring the highest standards of quality and excellence.

Dean of Educational Services, *(PSU)* **Riyadh, KSA** *09/2018 - 08/2020*
- Educated newly enrolled students about the organization's policies, services, and best practices, resulting in the successful completion of the first year of study

- Improved teaching and learning environment across the entire campus through inspirational leadership and assistance with academic advancements and faculty best practices

- Enhanced academic assistance practices, such as semester knowledge evaluations and yearly course placements, through increased control of educational services

- Coordinated all phases and processes of PSU student journey by leveraging best practices and restructuring the PYP into an independent department, facilitating its mission and improving the overall student experience

Chief Information & Technology Officer, *(PSU)* **Riyadh, KSA** *01/2015 - 08/2019*
- Spearheaded the implementation of new and existing technologies, systems, and applications to support academic operations, resulting in a significant increase in student success rate

- Developed and communicated a clear vision for technology utilization across the entire University, serving as a guide for the information technology services division and ensuring alignment with the institution's goals

- Implemented an Enterprise Resource Planning (ERP) system for the university's finance, accounting, and human resources divisions, streamlining processes and improving efficiency

- Established a continuous IT planning process that benefits the community, professors, staff, and students, fostering a culture of innovation and digital transformation

Department of Computer Science Chairman, *(PSU)* **Riyadh, KSA** *09/2015 - 08/2016*
- Led the department's leadership efforts to enhance curriculum and instructional programs, resulting in a broader range of courses and degrees available to students

- Supervised the department while promoting academic initiatives that fostered a culture of student success and staff-student solidarity, ensuring the greatest possible level of student accomplishment

- Collaborated with former students' employers to gather feedback and incorporate it into the curriculum, ensuring that the department's programs remained relevant and up-to-date with industry standards

- Successfully redesigned courses to comply with IEEE, ACM, and ABET curriculum standards, demonstrating a commitment to excellence in computer science education

Professional Development

- **New Course Developments:** SE 411: Software Construction, SE 311: Software Requirements Engineering, SE 415: Group Dynamics & Professional Practice, SE 489: DevOps Engineering SE 495: Software Entrepreneurship, CYS 402: Secure Software Engineering

- **New Track Curriculum Development:** Digital Transformation Track

- **New B.S. Curriculum Development:** BS in Software Engineering

- **Master Degree Curriculum Development:** MS in Software Engineering and MS in Cybersecurity Engineering Programs

- **Service & Administration (Committee):** Institutional Effectiveness, Institutional Executive Quality and Planning, Institutional Quality Committee, Institutional Policy, Institutional Strategic Planning, ABET Steering, Institutional Technology and Quality, Institutional Executive Research

- **Master Thesis Committee:** A Context-Aware Personalization Model for Augmented Reality Applications, User Experience Dimensions, Aspects, and Measures: Systematic Literature Review, Software Architecture Stability Evolution in Open-Source Object-Oriented Systems.

Research and Review Services

- **Conference Chair:**

  - 5th International Symposium on Data Mining Applications (SDMA2018)
  - 6th International Conference on Data Science and Machine Learning Applications (CDMA 2020)
  - 8th International Conference on Data Science and Machine Learning Applications (CDMA 2024)

- **Program Committee Membership:**

  - Workshop on Machine Learning for Predictive Models (MLPM 2014), 13th IEEE International Conference on Machine Learning and Applications (ICMLA 2014).
  - International Conference on Computing and Informatics (ICOCI 2015).
  - The Third Information Systems International Conference (ISICO 2015).
  - The Tenth International Conference on Software Engineering Advances (ICSEA 2015).
  - International Conference on Computing Education and Information Technology (ICCEIT 2015).
  - Workshop on Machine Learning for Predictive Models in Engineering Applications (MLPMEA 2015), 14th IEEE International Conference on Machine Learning and Applications (ICMLA 2015).
  - International Conference on Computing Education and Information Technology (ICCEIT 2015).
  - The 7th International Conference on Information and Communication Systems (ICICS 2016).
  - The 4th Symposium on Data Mining Applications (SDMA 2016).
  - The 4th Saudi International Conference on Information Technology, Big Data Analysis (KACSTIT 2016).
  - The Eleventh International Conference on Software Engineering Advances (ICSEA 2016).
  - Special Session: Machine Learning for Predictive Models in Engineering Applications, The 18th IEEE International Conference on Machine Learning and Applications (ICMLA 2019).
  - 19th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE2024)

- **Reviewer of International Indexed Journals:**

  - International Journal of Cloud Applications and Computing (IJCAC)
  - KSII Transactions on Internet and Information Systems
  - Journal of Ambient Intelligence and Humanized Computing
  - International Journal of Software Engineering and Knowledge Engineering
  - Information and Software Technology
  - Journal of Information Security and Applications
  - ACM Computing Surveys
  - Applied Artificial Intelligence
  - Cogent Business & Management
  - Education and Information Technologies
  - Information and Software Technology
  - Journal of Experimental & Theoretical Artificial Intelligence