TAMARA AMIN

WORK EXPERIENCE (SELECT)

CANAR Holding Group Innovation & Technology Team Leader

Kuwait, Dubai 2022 – Present

Innovation Management:

- Managing the integration of emerging technologies across Energy, Utilities, Infrastructure and O&G sectors by introducing new technology and business lines, for four sister companies spanning five countries, reporting directly to the Chairmen.
- Led the development of the inaugural portfolio-based Innovation Strategy and Idea Management System.
- Established CANAR's Emerging Technology Unit, serving as Head of Technology by driving the scouting, screening and commercialization of digital and deep tech solutions, securing 8 new partners within 18 months with 10+ in the pipeline.
- Developed training on startup landscape reporting, partner screening, client pitch decks, and commercial readiness levels.
- Expertly represented the company in international forums, partner negotiations and technical sales workshops.

Technology Management:

- Provided key technical due diligence to support early stage and FOAK investment decisions spanning Electrolyzers, Vertical Ag, Vertical Axis Wind Turbines, and Refinery Optimization & Catalyst Simulation Software.
- Principal contributor for AI-enabled Pipeline Leak Detection R&D project in partnership with Caltech and Beyond Limits, responsible for defining scope, product functinal requirements, experimental design, and real options financial analysis.
- Pioneered IMCO's first Drone Inspection Program, overseeing technology selection and roadmap, SOPs, ROI forecasting, commercial strategy, and personnel management, resulting in the region's most advanced OHTL inspection program.
- Played a pivotal role crafting RFP responses for a major Kuwaiti NOC including an Innovation & Digital Fabrication Center, Upskilling Program, and Digital Transformation Initiative in consortia with Google, Beyond Limits and NVIDIA.

Kuwait Foundation for the Advancement of Sciences Program Officer II

Kuwait 2021 - 2022

• Advised Director on strategic research priorities informed by literature review, SDG targets, and emerging trends.

- Spearheaded national capacity-building initiatives to enhance Tech Transfer, Knowledge Dissemination, Research Data Management, Research Design & Ethics, leading to improved impact outcomes in subsequent grant cycles.
- Contributed to 10-year Research Impact Analysis and spearheaded new KPIs and scoring criteria (now in effect).
- Led efforts to overhaul the Grant Management System and developed two new grant types (R&D and Policy Research).

Committee Member & Co-lead Author: Kuwait National Digital Library

Oct. 2020 - Feb. 2021

• Developed implementation plan, service roadmap and governance model for state-of-the-art LMS housing national data repository and curated collection targeting the forecasted needs of Kuwait's innovation ecosystem (approved by Board).

Program Officer I

2019 - 2021

- Managed 150+ academic research and R&D grants, focusing on proposals within the Sustainability and Industry 4.0 domains, including synthesizing financial and technical recommendations to support funding decisions, scouting reputable peer reviewers, and overseeing knowledge transfer, budget and post-award management.
- Implemented agile project management tools and enhanced department workflow, boosting productivity by 20%.
- Member of Director's COVID Emergency Resilience Program, delivering 15+ rapid-response and fact-checking reports.
- Created educational content to disseminate research outcomes and hosted 20+ webinars for internal and external training.

National Planning Committee (Research Support): Kuwait Institute of Business & Technology Aug. 2020 - Nov. 2022

• Facilitated strategic planning for a new university enabling technology-driven sustainable development by informing implementation, curriculum and business model design using foresight frameworks, service design methods, and data-driven decision science.

Freelance (Select) Innovation & Technology Consultant Kuwait, Dubai 2016 - Present

- Technology & startup landscape reports on Agri-Tech, Aquaculture and Grid Enhancement for CANAR Holdings (2021).
- Strategic advisory and securing of government funds for Infocap Associates, a boutique firm supporting gaps in Kuwait's innovation ecosystem through Technology Transfer and Innovation Management services (2021-22).
- Scouted surface engineering solutions to improve MEMS reliability using functional analysis (TRIZ, IGOR^AI) (2021).
- Advised 3 Kuwaiti NGOs on transitioning from donation-based financing to social entrepreneurship models (2021-2023).
- Technology scouting report on AIoT solutions for confidential client in the mining sector (2021).

OTHER: KOPO Ltd. (R&D Intern - UV Indicator for Solar Water Disinfection Can); Carnegie Mellon University (Summer Undergraduate Research Fellow); Bayt Abdullah Children's Hospice (Data Research Intern).

SKILLS & LANGUAGES

- **Design, Innovation & Management:** Wellspring SCOUT, IGOR^AI (TRIZ), PatSnap, VOSViewer, Adobe (InDesign, Photoshop), Monday, Canva, Zapier, ChatGPT (Advanced), Blender (Beginner), Procreate.
- Technical & Analytical: Python (Advanced), R Studio (Intermediate), ESRI, DroneDeploy, SCOPITO, Excel (Advanced), Palisade @Risk (Beginner), Unity (C# Beginner).
- Languages: English, Arabic.

EDUCATION

Carnegie Mellon University

Pittsburgh, PAGraduation Date: Dec 2019

MS in Civil & Environmental Engineering (GPA: 3.71; Major GPA: 3.92)

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- Activities/Awards: Kuwait MOHE Merit Scholarship, Sustainability Conference, Graduate Student Assembly.
- Coursework (Select): Sustainability Engineering, Civil Systems Investment Planning & Pricing, GIS, Advances in AI for Social Good, Applied Data Science, Reality Computing/Urban Design, Speculative Design, Transition Design, Environmental Policy & Planning Water Quality Engineering.

Carnegie Mellon University

Pittsburgh, PA

BS in Chemical Engineering (GPA: 3.5)

Graduation Date: May 2018

- Activities: ChemE Car (Head of Arduino Modeling), Robotics Club (Student Leader for 3D Printed Drone Course), Student Instructor (Organic Chemistry Prep Course), Lubrazol Lab (Chemical Engineering Work Study).
- Awards: University & College Honors, Honors Research Fellow, CheSS & Berg Scholar, MOHE Merit Scholarship.
- Coursework (Select): Climate Change for Chemical Engineers, Entrepreneurship for Scientists, Futures Studies (Foresight), Science Writing & Communication, Advanced Physical Chemistry, Advanced Reactor Engineering, Optimization & Algorithms, ChemE Product Design, Surgery for Engineers.

ACADEMIC RESEARCH

- Forecasting Water Scarcity in Ojai, California and Mapping Social Entrepreneurship Approaches Using Systems Design: Transdisciplinary Honors Study Presented to Ojai Town Hall. (CMU/ASHOKA/Flip Labs). 2018-2019.
- Deepwater Horizon Dispersants Silence Bacterial Bioremediation of Oil Spills via Quorum Quenching: Awarded Berg & CheESS Scholar, SURF Fellow & Honors Research Fellow, Winner of CIT Poster Session, Presented at AIChE 2016, CMU Meeting of the Minds. (CMU). 2015-2016.
- Use of "Emotional" Language By a Humanoid Robot Impacts Human Competitive Strategy & Perception in a Game-Theoretic Setting: Published in IEEE and RO-MAN. (CMU). 2018-2019.
- Environmental Transformation of Gold Nanoparticles in Wetlands. (CMU CEINT/Duke Mesocosm). 2016

TRAINING (SELECT)

KFAS Hydrogen Workshop (German Embassy of Kuwait), Computer Vision Nanodegree (Udacity), GenAI for CEOs (Kuwait YPO); Innovation Management (Coursera); HarvardX Lab to Market (edX); Permaculture Design Certificate; Venture Capital & Private Equity (Coursera - Expected Completion Date: April 2024).

SERVICE EXPERIENCE

Rotary Youth Leadership Awards

Bahrain

Program Leader and Facilitator for National Sustainability Ideathon

2022

• Designed a 5-day program for students across 6 universities to develop and pitch solutions to global challenges by bringing together 10 learning partners and teaching Skills Labs on sustainability concepts and ideation frameworks.

CMU Sustainability Weekend

Pittsburgh, PA

Head of Student Planning Committee

2016-2018

- Championed the theme of 'Sustainability, Inclusivity & Equity' by organizing panels on equitable mobility, climate
 communication, sustainable food systems, and inclusive tech investment, and grew partnerships and sponsorships by 50%.
- Accepted in PGH Inclusive Innovation Week and as a Case Study & Workshop in AASHE.

MARHACAR (Humanitarian Aid Distribution NGO)

Lesvos, Greece/Remote

Supply Chain Coordinator & Emergency Translator

2014-2016

• Optimized donation distribution during Syrian refugee crisis and established automated alert system using open source tools.

OTHER: Trashtag Kuwait (Board Member & Graphic Designer); Palestinian Cultural Center (Sr. Committee Member).

PROJECTS (SELECT)

- Comparing Public Policy Packages to Promote Vehicle-to Grid (V2G) Technologies Using Decision Science (Multi-Attribute Utility Theory with Sensitivity Analysis). 2017.
- Feasibility of Proposed Nicaragua Canal using Social Cost-Benefit Analysis, Sensitivity/Risk and Environmental Social Impact Assessment (Palisade @Risk, Monte Carlo, Social-Net Profit Valuation, IFC Standards). 2017.
- Optimizing bp Shale Ethylene Plant for Emission Avoidance and Profitability Using Conventional Cracking and Experimental Oxidation Alternatives (ASPEN+/MATLAB, FMEA). 2017.
- Designing a Localized Anti-Cramping Bioactive Medication and Delivery System for Women's Reproductive Health (Patent Search, Technical-Economic-Analysis with GAMS, LCA, Commercialization Plan). 2016.
- Designing Speculative Futures of Small Businesses in Pittsburgh Impacted by Automation & Digital Marketplaces using Ethnographic Field Work and Scenario-based Foresight (with CMU's Imaginaries Lab). 2018.
- Designing Ecosystems of Interventions to Combat Declining Pollinators Using 'Transition Design' (Wicked Problem Mapping, Foresight, Socio-technical Transition Theory, Systems Thinking). 2018.