

EDUCATION

Doctor of Philosophy, Computer Science, University of Calgary, Alberta, Canada, April 2023

- **GPA:** 4.0/4.0

Master of Science, Computer Science, The American University in Cairo (AUC), Cairo, Egypt, Spring 2014

- **GPA:** 3.875/4.0

Bachelor of Science, Computer Science, AUC, Fall 2006

- **Overall GPA:** 3.811/4.0 (Sum Cum Laude)
 - **Major GPA:** 3.892/4.0
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TEACHING RELATED EXPERIENCE

Canadian University Dubai, School of Engineering, Applied Science and Technology, Dubai, UAE

Visiting Assistant Professor of Computer Science

January 2024-Present

- Deliver comprehensive lectures and facilitated learning in advanced computer science courses, teaching:
- “Software Specification”: the course focuses on the theory of computing, computability issues in software specifications, automata, grammar-based techniques, and software verification
- “Virtualization and Cloud Computing”: the course introduces the fundamentals of cloud computing and investigates current cloud computing technologies, including technologies for infrastructure, virtualization, and mobile computing
- Conduct continuous assessment of student progress through diligent record-keeping, providing timely grade submissions in accordance with university schedules
- Collaborate with the Program Chair in evaluating and enhancing course content, objectives, and sequencing for an optimized curriculum
- Contribute to curriculum development by recommending curricular changes and developing new courses as per departmental needs
- Maintain regular office hours, offering academic guidance and support to students while tracking and assisting at-risk students to improve their academic performance
- Participate in departmental meetings and faculty assemblies, contributing to the broader academic community and departmental decision-making processes
- Engage in professional development activities, including attending orientation and workshops, to stay abreast of the latest advancements in computer science and teaching methodologies
- Actively participate in community outreach activities, representing and promoting Canadian University Dubai to external audiences

Southern Alberta Institute of Technology, Alberta, Canada

February 2024-Present

Casual Faculty

- Remotely leading a team of five subject matter experts to comprehensively revamp the Business Intelligence Program, enhancing its relevance and effectiveness
- Collaborate closely with industry professionals to align the curriculum with current market demands, ensuring graduates possess in-demand skills
- Conducted extensive research on emerging trends in business intelligence to keep the curriculum at the forefront of technological advancements

University of Calgary, Computer Science Department, Alberta, Canada

2021-2022

Instructor

- Instructed the Fall 2021/Winter 2022 - CPSC 594: Software Engineering Capstone Project Course
- Developed and delivered comprehensive course material tailored to bridge academic learning with real-world industry applications
- Facilitated a unique learning environment where students collaborated with industry partners, embarking on year-long projects to apply their software engineering knowledge in practical settings
- Facilitated group discussions on various industry-relevant topics, ensuring students were well-equipped with the latest industry insights and best practices

- Taught a diverse range of topics, including but not limited to:
 - Project scoping and its significance in software development
 - Techniques for effective requirement gathering
 - Agile project management and its role in modern software development
 - Principles of system design and their impact on software functionality
 - Comprehensive approaches to testing and quality management, ensuring software robustness and user satisfaction
- Participated in multiple university-led teaching training sessions, honing my pedagogical techniques and ensuring the delivery of high-quality, engaging, and effective instruction to my students

University of Calgary, Computer Science Department, Alberta, Canada
Graduate Teaching Assistant

2015-2020

- Conducted interactive tutorials, providing students with invaluable hands-on lab experiences to complement theoretical learning
- Assumed responsibility for grading assignments and contributing to the evaluation of final exams, ensuring fair and accurate assessment
- Held office hours, offering personalized guidance and support to students, addressing their questions, and enhancing their understanding of course material
- Assisted in the teaching of the following courses:
 - Fall 2020 – Assisting course: “Thinking with Data”
 - Fall 2019/Winter2020 - Assisting course: “Software Engineering Capstone”
 - Fall 2018/Winter 2019 – Assisting course: “Software Engineering Capstone”
 - Winter 2017 - Assisting course: "Software Analysis and Design"
 - Fall 2016 - Assisting course: "Software Analysis and Design"
 - Winter 2016 (Head TA) - Assisting course: "Introduction to Problem-Solving using Application Software"
 - Fall 2015 - Assisting course: "Introduction to Problem Solving using Application Software"

Bow Valley College, Alberta, Canada
Subject Matter Expert

2017-2020, 2023

- Crafted a structured syllabus to guide students through learning the course
- Established a fair and transparent grading scheme to evaluate student performance
- Designed engaging modules and lesson plans to facilitate effective learning
- Developed interactive learning activities to enhance hands-on skills
- Formulated assignments and projects that challenge students to apply their knowledge in practical scenarios
- Designed and developed the following courses:
 - Introduction to Databases
 - Relational Databases
 - Algorithms and Data Structures
 - Database Management (the post-diploma track)
 - Technology Information Laboratory
 - Object Oriented Programming

The American University in Cairo, Cairo, Egypt

Fall 2010

Graduate Teaching Assistant, Computer Science Department

- Provided office hours each week, offering students personalized guidance and addressing their academic inquiries
- Conducted hands-on labs weekly, facilitating an environment for the students to hone their practical skills
- Evaluated assignments and midterms, ensuring a fair and comprehensive assessment
- Organized and led revision sessions, reinforcing key concepts and preparing students for upcoming evaluations

The American University in Cairo, Cairo, Egypt

2005-2006

Undergraduate Teaching Assistant, Computer Science Department

- Mentored students with their project in the Design of Web-Based Systems course (2006)
 - Assisted in teaching the Operating System course and Fundamentals of Database Systems (2005)
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WORK-RELATED EXPERIENCE

Sagacity Consulting LLC, UAE

Co-Founder, General Manager

2022- Present

- Co-founded Sagacity Consulting, an innovation and technology consultancy, providing innovative solutions in digital transformation, AI and education for our clients
- Spearhead the branding initiative, formulating the company's mission, vision, and core values
- Actively networking to identify and engage potential clients, expanding the company's reach
- Successfully negotiating and closing multiple deals, contributing to the company's revenue growth
- Leading business development tasks, ensuring consistent growth and expansion of service
- Conducting in-depth research on emerging education technology trends, positioning the company at the forefront of innovation
- Recruited top-tier talents, ensuring alignment with the company's core values and strategic objectives
- Sought and established partnerships with other education technology providers, enhancing the company's offerings and market presence
- Providing training for Microsoft Azure technology and working through a connection with Microsoft Learn to update their learning curriculum

The American University in Cairo, Cairo, Egypt

2010- 2014

Student Information System Specialist

- Contributed to the seamless integration of the university's diverse information systems, enhancing data accessibility and system interoperability
- Successfully executed the migration of millions of records from the legacy SIS+ system to the state-of-the-art Ellucian Higher Education system, Banner, ensuring data integrity and minimal downtime
- Collaboratively gathered and analysed system requirements, leading to tailored customizations that addressed the unique needs of various university departments
- Leveraged advanced technologies, including Oracle 10i, Ellucian Higher Education Banner v8.1, and Argos Reporting System, to optimize system performance and user experience

Advanced Technology Lab in Cairo, Microsoft Research, Cairo, Egypt

2008 – 2009

Research Software Development Engineer

- Collaborated with a dynamic team to pioneer innovative ideas and applications, driving technological advancements
- Engineered and refined prototypes/components, ensuring alignment with rigorous technical specifications
- Conducted meticulous testing of developed components, guaranteeing robustness and functionality
- Offered expert technical support across diverse projects, ensuring timely resolution of challenges
- Led brown-bag sessions on pivotal topics, fostering continuous learning and enhancing team expertise
- Dedicated 20% of work time to individual contribution projects, encompassing ideation, comprehensive research, implementation, and rigorous testing

Projects:

Collaborative Environment Services

- Developed the SVM classifier, aiming to enhance the data categorization accuracy
- Led the developing and testing of a project pilot, overseeing application deployment and support
- Assessed various clustering techniques to optimize data segmentation.

Digital Content Services

- Seamlessly integrated the DBSCAN clustering algorithm into a digital information retrieval project, enhancing data retrieval efficiency
- Mentored an intern, guiding the development of an application interface that bridged the C++ system engine with a user-friendly WPF interface

Multimedia and Mobile Content Services

- Innovated a new project for real-time video annotations
- Undertook comprehensive literature reviews and related work surveys, presenting findings to stakeholders
- Pioneered a prototype for the project, culminating in a patent filing in collaboration with the team

ITWorx Egypt, Cairo, Egypt

2007 – 2008

Solutions Specialist, Business Development Team

- Devised comprehensive technical proposals tailored to meet customer needs as outlined in RFPs, ensuring alignment with both technical and business objectives.
- Collaborated with sales and marketing teams, collaborating in event preparations and presentations to enhance brand visibility and engagement
- Contributed to the conceptualizing new product and service offerings, driving business growth and diversification
- Led technical initiatives to elevate quality and boost productivity across the board
- Ran informative webinars, effectively presenting the company's product suite to a diverse audience
- Researched emerging technologies, ensuring the company's continued relevance and innovation
- Managed the entire proposal lifecycle, from kick-off meetings to the final delivery, ensuring timely and high-quality submissions
- Conducted meticulous RFP analyses, coordinated tasks among proposal stakeholders, and steered status and risk assessment meetings to ensure alignment and mitigate potential challenges

ITWorx Egypt, Cairo, Egypt

2007

Software Engineer

- Developed and rigorously tested software solutions, ensuring they met project specifications
- Contributed to the deployment of software solutions, ensuring seamless integration and minimal disruptions
- Actively participated in team meetings and training sessions, contributing to collaborative problem-solving and continuous learning

Key Projects:

MLG Attendance Recording and Tracking Module (Education)

- Designed and developed comprehensive reports using SQL Reporting Services 2005.
- Developed a user control interface to enhance report viewing experiences
- Collaborated in the deployment of the module, ensuring its successful integration.
- Leveraged a suite of technologies, including .NET, SQL Server 2005 Reporting Services, and Microsoft SharePoint 2003.

Solo E.S.B. Website

- Successfully implemented four modules: News, Quotes, Career, and FAQ Administrator
- Researched the DotNetNuke framework, gaining insights into its localization feature
- Introduced two advanced features: a caching mechanism to boost website performance and a lookup table module tailored for quotes
- Utilized a diverse technology stack, including DotNetNuke framework, ASP.NET 2.0, AJAX, .NET Framework, Visual C#, Visual Studio, Windows Server 2003, Microsoft SQL Server Reporting Services 2005, and Oracle9i database engine

ITWorx Egypt, Cairo, Egypt

August 2006

Software Development Trainee, Technical Architect Team

- Designed and developed, in a group of trainees, a tool that is responsible for analysing a database generating statistics and providing a graphical user interface for data visualization

PUBLICATIONS AND PATENTS

May Mahmoud, Robert Walker, Joerg Denzinger. API Usage Templates Examples via Structural Generalization. Journal of Systems and Software. 2024.

Motaz El Saban, Xin-Jing Wang, May A. Sayed. Real-time annotation and enrichment of captured video. Microsoft Corporation. US 20110295851 A1. Dec 1, 2011

RESEARCH PROJECTS

“Mining API Usage Patterns using Structural Generalization,” Ph.D. Thesis, University of Calgary, September 2015- April 2023

- Researched the use of structural generalization to generalize Application Programming Interfaces (APIs) usage examples into templates

- Showed through evidence that the implemented approach can produce templates that achieve a balance between completeness and compression of the usage examples superior to the best alternatives
- Implemented a visualization tool to investigate the utility of the mined patterns in helping developers understand API usage.
- Showed through evidence that the API usage templates produced by the approach allow developers to solve programming tasks in less time and with greater confidence than the best alternative API usage mining technique

“Utilizing Graph-based Representation of Text in A Hybrid Approach to Multiple Documents Summarization,”

Master’s Thesis, AUC, September 2012 – May 2014

- Researched the automatic text summarization of multiple documents
- Employed a novel method that seamlessly integrates:
 - Statistical extractive techniques for pinpointing key textual elements
 - Sentence clustering to group similar content, ensuring thematic consistency
 - A graph-based text representation of the text used in the final summarization process
- Implemented the approach to summarize multiple documents into a coherent and well-structured summary
- Showed through evidence that the summary produced by the approach has better results than the best alternative

HONORS AND AWARDS

Faculty of Science Graduate Scholarship, Computer Science Doctoral Program, University of Calgary, March 2021

Computer Science Research Award, Computer Science Doctoral Program, University of Calgary, Fall 2017

Computer Science Research Award, Computer Science Doctoral Program, University of Calgary, Fall 2016

Graduate Teaching Assistant Fellowship, Computer Science Doctoral Program, University of Calgary, Fall 2015 – Winter 2020

Highest GPA Award, Computer Science Master's program, AUC, Spring 2011

University Laboratory Fellowship Award, AUC, Fall 2010

Dean’s List of Academic Honours, AUC, 2005-2006

The “Best Computer Science Thesis Project” Award, AUC, Fall 2006

CAREER-RELATED COURSES AND CERTIFICATIONS

Microsoft Certified Trainer, January 2024, Certification number: F26B0C-35E33D

Microsoft Azure AI Engineer Associate, October 2023, <https://learn.microsoft.com/api/credentials/share/en-us/MaySayed-8070/27258D6A7D53C383?sharingId=267367F5FFA66A39>

Artificial Intelligence IT Specialist Certificate, May 2023, verify.certiport.com: wXCRb-48RM

Microsoft Azure AI Fundamentals Certificate, May 2023, verify.certiport.com: 6Hy4-DwWu

Intuit Design for Delight Innovator Certificate, May 2023, verify.certiport.com: HNrV-XMWn

Certificate in University Teaching and Learning, Taylor Institute for Teaching and Learning, University of Calgary in Canada, 2022

Getting started with Inquiry-Based Learning (IBL), Taylor Institute for Teaching and Learning, University of Calgary in Canada, May 2021

Course Design Program, Taylor Institute for Teaching and Learning, University of Calgary in Canada, May 2021

Handling Challenges in the Zoom Classroom, Taylor Institute for Teaching and Learning, University of Calgary in Canada, May 2021

Sparkling Students’ Curiosity Through Research-Centred Teaching and Learning, Taylor Institute for Teaching and Learning, University of Calgary in Canada, May 2021

The Data Scientist’s Toolbox, Coursera Verified Certificates, License 7EVKDCVPKJ, <https://www.coursera.org/signature/certificate/7EVKDCVPKJ>, November 2014

R Programming, Coursera Verified Certificates, License DFL9VZ4PBY, <https://www.coursera.org/signature/certificate/DFL9VZ4PBY>, December 2014

Getting and Cleaning Data, Coursera Verified Certificates, License LNSEZEJA34, <https://www.coursera.org/account/accomplishments/certificate/LNSEZEJA34> , March 2015

SKILLS

Technical Skills:

- Programming and Scripting Languages: C++, C#, Java, JavaScript, Python, R and VB.Net.

- Technologies and IDEs: Microsoft Azure, .Net, Microsoft Visual Studio, SQL Server, Microsoft Office SharePoint, HTML, XML, CSS, NANT, OpenCV, Qualtrics and Tableau.
- Databases: SQL Server, Oracle.

Linguistic Skills:

- Excellent in both written and spoken Arabic and English languages.
- Fair knowledge of French

REFERENCES**Robert James Walker**

Professor

Department of Computer Science

University of Calgary

Calgary, Alberta, Canada

Phone: +1 (403) 210-9593

Email: rwalker@cpsc.ucalgary.ca

walker@ucalgary.ca

Jörg Denzinger

Associate Professor

Department of Computer Science

University of Calgary

Calgary, Alberta, Canada

Phone: +1 (403) 220-5574

Email: denzinge@cpsc.ucalgary.ca

denzinge@ucalgary.ca

Sherif Gamal Aly

Professor and Chair

Department of Computer Science and Engineering

The American University in Cairo

Cairo, Egypt

Email: sgamal@aucegypt.edu