MOSTAFA HAMZA

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Highlights of Qualifications

- **17+** years in Solution Architecture, Software Engineering, Research, Project Management and Business Analysis on various levels with customer facing roles and responsibilities
- Experience with CI/CD, Virtualization, Docker, Java, C#, RabbitMQ, Cassandra, Azure, AWS

Work Experience

Microsoft, Vancouver, BC, Canada   **2021- Present**

Tech Lead - Software Engineering

- Promote and encourage diverse and inclusive environment for all team members to be curious, ask and engage in discussions, and ensure that all voices are heard
- Emphasize on inclusive language and practices in all communication and decision-making, ensuring that all team members feel valued and included
- Lead team to increase revenue for Bing Search Engine by designing, architecting, building, testing, deploying, and supporting features
- Collaborate with partner teams and internal clients on various projects to increase Bing revenue and daily active users
- Organize diversity and inclusion training sessions for the engineering teams, focusing on topics such as unconscious bias and allyship
- Work closely with data scientists and machine learning engineers to validate the models and implement them
- Responsible for the end-to-end features' life cycle
- Integrated Bing with OpenAI ChatGPT

Sagacity Consulting, Canada   **2022 – Present**

Partner Consultant

- Design course material, slides, assignments, and exams for online courses for high school students, and professional software developers such as HTML, CSS, and JavaScript
- Develop and collaborate on programs tailored to audience needs while ensuring sequencing and scaffolding of the curriculum

J.D. Power, Calgary, AB, Canada   **2017- 2021**

Software Development Team Lead

- Lead consumer division and data and analytics engineering teams to design, architect, build, test, deploy and support enterprise B2C, and B2B large scale solutions and products that serve millions of clients using full-stack technologies such as: Azure, AWS, .Net, SQL Server, Azure DevOps, HTML, **React**, JavaScript, JQuery, Docker, Kubernetes
- Grow software development team in terms of size and responsibilities with a focus on quality, delivery on-time, and business partnership
- Collaborate with business owners, and different stakeholders on creating and developing the vision and the roadmap for the different products and solutions
- Design and develop a tool that minimized the manual work for creating the build by at least 70-80% (saving at least 40 hours of work per month)
- Developed a 3-phased 1-1 leadership plan with each of the direct reports to ensure job, career, and team satisfaction
- Increased team's productivity by migrating the development infrastructure from stand-alone applications to Docker containers which eliminated troubleshooting environment specific issues
- Investigate different technologies and frameworks, and create proof of concepts based on business requirements
- Lead a software team of 6 members to design, build, test, and support inventory management system that processes tens of millions of records daily, using .Net Core, **MySQL**, **Cassandra**, and RabbitMQ, following the Agile methodologies
- Perform code, architecture, and design reviews to enhance quality and ensure bug-free products and solutions

- Deploy both on-premises and cloud-based solutions on Azure using CI/CD methodologies and tools
- Create WBS, assign tasks to team members, and track their progress
- Work closely with the Solution Analysts, Project Managers, and the client to prioritize the features and functionalities required

City of Calgary, Calgary, AB, Canada
<u>Senior IT Consultant, Client Solutions</u> **2016 – 2017**
- Architected, built, tested, and supported new features and existing ones FileTracker using Visual Studio, ASP.NET, C#, WCF and TFS, and ensured client satisfaction regarding their change requests
- Performed debugging and extensive troubleshooting on reported problems and ensured the delivery of accurate technical solutions
- Communicated with the client to manage requirements and change requests either online (face-to-face meetings) or offline (emails/Skype for business)
- Maintained codebase by identifying bugs or enhancements

ITCentral, **2008 –2014**
<u>Software Delivery Manager</u>
- Designed, built, and tested a portal named CanadaReside for helping residents in their moving in Canada using MVC, Django, Python, MySQL, HTML5, CSS3, JavaScript, JQuery, Bootstrap
- Managed product releases to meet business goals and strategies using Agile and Scrum
- Led a team to engineer and implement mobile development (Android and iOS) applications and games for Egyptian folklore songs using multiple platforms
- Led a remote team and developed a website for United States 2010 census using ASP.NET, C# JavaScript, JQuery and SQL server
- Designed, built, implemented, and deployed website for a car rental in Egypt using ASP.NET, C# JavaScript, JQuery and SQL server

IBM, Giza, Egypt 2009 –2014
<u>Life Cycle Manager (LCM) for Middle East & Africa (MEA)</u> 2013 –2014
- Planned and managed with a team of 4 the split of Central Eastern Europe, Middle East, and Africa (CEE-MEA) from Europe support by changing the support structure to fit the needs and align with the business directions. The work resulted in decreasing the costs, and increasing customer satisfaction
- Improved average solution time spent by front end support teams for Application and Integration Middleware (AIM) division by **47%** for CEE and **41%** for MEA during within **3 months**
- Decreased support costs for MEA for AIM division by **27%** within **3 months**
- Designed and built tools and scripts to minimize manual work of managing/updating of open tickets within CEE-MEA

<u>Life Cycle Manager (LCM) for Middle East and North Africa (MENA)</u> 2012 –2013
- Advised the Domain Operational LCM team (OLCMs), key subject matter experts in the GMTs, SW Country Managers, and the regions leaders to optimize the support structure for effective end to end management of the product throughout its life cycle
- Minimized software support costs (decrease **18%** for STG products and **15%** for SWG products) and maximized customer satisfaction (increase **8%**) and team performance under tight budget for the year 2012 according to the planned targets and KPIs
- Reduced average time spent by front end support teams until a solution is provided to the clients by **40%**
- Improved front end support teams' responsiveness to IBM clients by more than **5%** in 2012 and **3%** in 2013
- Analyzed and monitored the performance of SW Support Teams in MENA by constantly examining any abnormal trends rather than the planned figures and dig deep into root causes to identify the issues and address them

- Devised processes for aligning the delivery model with corporate direction which includes designing, reviewing, and applying processes to be followed by the different support teams
- Acted as Root Cause Manager (RCM) to identify the dissatisfactions in IBM support delivery and work on enhancing it by addressing the issues and changing the processes accordingly

Maintenance and Technical Support Services (MTSS) Delivery Project Manager   2010 –2013

- Managed Hardware Engineers for delivering hardware maintenance and performance tuning for E-finance for IBM infrastructure with high quality and under budget
- Established a framework for communications, reporting, procedural and contractual activities under the IBM Management Technical Support Services engagement
- Increased Growth Profit by **27%** by decreasing the costs of tasks without affecting customer satisfaction

Enhanced Technical Support (ETS) Team Leader for MENA   2009 –2013

- Directed, organized, and monitored **17** ETS Account Advocates in MENA region and more than **110** customers
- Educated new team members about ETS processes and procedures
- Ensured all IBM support teams respond to the customers according to the defined SLAs
- Decreased down-time for critical systems by the proactive advice by more than **20%**

Software Support Engineer   2009 –2011

- Supported AIX, Tivoli Storage Manager (TSM) and DB2
- Designed and built complex infrastructures of System P machines with clustering on AIX environment
- Investigated AIX system failures, in addition to DB2 and TSM problems

Online Modern Solutions (OMS), Cairo, Egypt   2009 –2009
Technology Specialist

- Implemented and customized HP Service Manager for different organizations in Middle East
- Designed and developed a survey module to be added to the service manager to supply surveying engine for monitoring performance
- Engaged in project for Injazat (Abu Dhabi Company) to execute service manager according to their requirements

LinkDotNET, Cairo, Egypt   2007 –2008
Solution Developer

- Worked in revamping the website Otlob.com on different phases according to the customer's requirements and the market needs using C#, ASP.NET and SQL Server

Education

- **PhD., Computer Science, University of Calgary,** Canada *(GPA 3.9/4.0)*   2014 – 2019
- **MSc., Computer Science, The American University in Cairo (AUC)**, Egypt *(GPA 3.55/4.0)*   2007–2012
- **BSc., Computer Science, AUC,** Egypt *(GPA 3.453/4.0)*   2002–2007

Publications

- Andrea Pagotto, Lindsay Heimerl **, Mostafa Hamza,** Rodrigo Toso. Improving Bing with Prompt-Based Large-Scale Language Models: Application to Defective Answer Suppression. Microsoft Machine Learning, AI & Data Science Conference (MLADS) December 2023.
- **Mostafa Hamza.** Identifying, Structuring, and Evolving Features in Software Product Lines. Department of Computer Science, University of Calgary, June 2019.
  https://prism.ucalgary.ca/bitstream/handle/1880/110543/ucalgary_2019_sayed_mostafa.pdf

- **Mostafa Hamza**, Robert J. Walker, and Maged Elaasar. CIAHelper: Towards change impact analysis in delta-oriented software product lines. In Proceedings of the International Systems and Software Product Line Conference, pages 31–42, 2018. doi: 10.1145/3233027.3233036
- **Mostafa Hamza**, Robert J. Walker, and Maged Elaasar. Unanticipated evolution in software product lines versus independent products: A case study. In Pro-ceedings of the 5th International Workshop on Reverse Variability Engineering (REVE 2017), International Software Product Line Conference, pages 97–104, 2017. doi: 10.1145/3109729.3109739
- **Mostafa Hamza** and Robert J. Walker. Recommending features and feature relationships from requirements documents for software product lines. *In Proceedings of the 4th International Workshop on Realizing Artificial Intelligence Synergies in Software Engineering (RAISE '15),* ACM/IEEE International Conference on Software Engineering, 2015.
- **Mostafa Hamza**, Sherif Aly, Maged Elaasar. "Automated Generation of Pervasive Systems Architectures: A Detailed Empirical Evaluation". International Journal of Software Engineering, Technology and Applications, Vol. 1, No. 1, 2015 pp.64 - 89. DOI: 10.1504/IJSETA.2015.067531
- **Mostafa Hamza**, Sherif G. Aly and Hoda Hosny. "An Approach for Generating Architectures for Pervasive Systems from Selected Features". *Software Engineering Research and Practice (SERP 2011).* July 18-21, 2011. Las Vegas, Nevada, USA.
- **Mostafa Hamza** and Sherif G. Aly. "A Study and Categorization of Pervasive Systems Architectures Towards Specifying a Software Product Line." *Software Engineering Research and Practice (SERP 2010).* July 12-15, 2010. Las Vegas, Nevada, USA. Pages: 635-641.
- Mohy Mahmoud, Sherif G. Aly, Ahmed Sabry, **Mostafa Hamza**. "A Jabber Based Framework for Building Communication Capable Java Mobile Applications". *International Journal of Information Technology (IJIT).* Volume 15, No. 1, 2009.

Certificates and Training

Microsoft Certified Solution Developer (MCSD)	2019
Professional Scrum Master I	2018
Lean Six Sigma Green Belt	2018
IBM Emerging leaders training and courses	2012-2013
Project Management Professional (PMP), Certified through Project Management Institute (PMI)	2012
ITIL Foundation Certificated in IT Service Management	2012
Certified Experienced IT Specialist at IBM	2011
AIX System Administration II: Problem Determination, IBM	2009
IBM Tivoli Storage Manager 6.1 Implementation and Administration, IBM	2009

Honors and Awards

NOTT Award, Autodata Solutions. Awarded in recognition of outstanding achievement in Inventory Project	2020
NOTT Award, Autodata Solutions. Awarded in recognition of outstanding achievement for completing MCSD Certification	2019
Research Award, University of Calgary, Computer Science Department	2015 –2016
Eminence and Excellence Recognition Award for high performance, IBM. Awarded quarterly to the highest achiever and best contributor for IBM strategy in the region	2012
MSc. Dean's List of Honor, AUC. Given annually to students with GPA above 3.5	2009 - 2010
Best thesis project award, Department of Computer Science, AUC	2007
BSc. Dean's List of Honor, AUC. Given annually to students with GPA above 3.3	2005 - 2007

Interests

Karate: Best karate player on campus, AUC	2005 - 2007
Parachuting: 4th place in national tournament**,** Egyptian Parachuting and Aeronautic Federation	2005