Riyadh, Saudi Arabia

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Ahmad Abdelfattah Haggag

Personal Information

Nationality: Egyptian
Date of Birth: 9 August 1983
Languages: Arabic *(mother tongue)* & English *(fluent)*

Objectives

① Build high-quality scalable software that works 24/7.

② Apply computer science & AI to solve real-world problems.

Education & Certifications

➢ **Master of Science in Computer Science (Machine Learning)**
Jan 2018 - Now   Georgia Institute of Technology   Online

➢ **AWS Certified Solutions Architect – Associate** (Link[1])
Mar 2017   Amazon Web Services   Riyadh

➢ **Bachelor of Computer Science**
2001 – 2005   Ain-Shams University   Cairo

➢ **Cambridge FCE** (First Certificate in English Certificate)
Feb 2003   University of Cambridge   Cairo

➢ **Cambridge PET** (Preliminary English Test Certificate)
Jun 1999   University of Cambridge   Cairo

1. https://goo.gl/44sP4m

Experience

➢ Mar 2013 – Now
Chief Software Architect   @e-Sealed/ComSpots   Riyadh

- ○ Company site: www.e-sealed.com

- ○ Role: Architect and develop scalable backend services. And coaching technical teams.

- ○ Notable Projects:

  - Bareede: Architected & built scalable web email system (similar to Gmail).
  - Dalily: Architected & built the most popular Caller ID solution in Arab world with 10M+ users (similar to TrueCaller).
  - e-Commerce solution: Architected & built e-Commerce solution

- ○ Achievements:

    - ■ Architected & built horizontally scalable backend network services and microservices via Java and Node.js.
    - ■ Implemented modern software CI/CD pipelines via Jenkins Ansible, and Kubernetes.
    - ■ Built several RESTful APIs and web services which serve millions of users daily. Ex. dalilyapp.com has 10M+ users.
    - ■ Text mining our database of 1 billion contact names.
    - ■ Built several web portals via various CMSs and frameworks.

- ○ Technologies: Java, Netty, Vertx, ElasticSearch, Apache Kafka, Spark, Node.js, Angular, Drupal, Laravel, PHP, Linux, Git, Nginx, MySQL, Microsoft SQL Server, Active Directory.
    Jenkins, Ansible, Docker, Kubernetes, AWS

- ➤ May 2018 – September 2019
  Chief Software Cloud Architect   @Kayako   Remote

    - ○ Company site: www.kayako.com

    - ○ Role: Optimize & Simplify AWS cloud infrastructure for one of the most popular help desk systems in the world; Kayako.

    - ○ Achievements:

        - ■ Simplified AWS cloud architecture
        - ■ Reduced annual hosting cost 20%
        - ■ Increased uptime 15%
        - ■ Increased overall performance (serves 50k request/minute compared to max 30k)
        - ■ Increased system stability & implemented fault-tolerance
        - ■ Enhanced system monitoring and alerting

    - ○ Technologies: AWS, Kubernetes, Chef, Ansible, Docker, Python, PHP, GO, MySQL

- ➤ Sep 2010 – Mar 2013
  Software Architect   @NTP Software   Cairo

    - ○ Company site: www.ntpsoftware.com

    - ○ Role:

        - ■ Design, plan, and develop new products and maintain the company's main product; QFS (Quota & File Sentinel) used by millions of users every day.
        - ■ Train developers on latest technologies and computer science concepts.
        - ■ Write SRS *(Software Requirement Specification)* documents.
        - ■ Write DDS (Detailed Design Specification) documents.

    - ○ Achievements:

        - ■ Implemented QFS *(the world's most popular storage management software on SAN/NAS/Windows)* on the HNAS *(Hitachi NAS)* and EMC platforms.

- ■ Rebuilt www.ntpsoftware.com using Drupal.

- ○ Technologies: C++, .NET, Concurrency, Active Directory, Windows APIs, WinDbg, Linux, Git, ONTAP, EMC Celerra, BlueArc NAS, HDS HNAS, Drupal, PHP, Acquia Cloud.

- ➢ Oct 2006 – Sep 2010
  Team Leader   @NTP Software   Cairo

  - ○ Company site: www.ntpsoftware.com

  - ○ Role:

    - ■ Develop new products and maintain company's main products; mainly QFS *(Quota & File Sentinel)*.
    - ■ Interview and hire talented developers.
    - ■ Manage team of C++ developers.
    - ■ Write SRS *(Software Requirement Specification)* documents.
    - ■ Write DDS (Detailed Design Specification) documents.
    - ■ Debug customer issues.
    - ■ Coordinate with EMC and HDS engineers to architect an OS compliant with QFS.

  - ○ Achievements:

    - ■ Implemented QFS *(the world's most popular storage management software on SAN/NAS/Windows)* on the EMC Celerra platform.

  - ○ Technologies: C++, Windows APIs, MFC, .NET, Concurrency, ONTAP, EMC Celerra, WinDbg.

- ➢ Mar 2006 – Oct 2006
  Software Developer   @NTP Software   Cairo

  - ○ Company site: www.ntpsoftware.com

  - ○ Role: Develop new products and maintain company's main products; mainly QFS *(Quota & File Sentinel)*.

  - ○ Technologies: C++, C#, Windows APIs, MFC.

- ➢ Jul 2005 – May 2006
  Software Developer   @Sakhr   Cairo

  - ○ Company site: www.sakhr.com

  - ○ Role: Develop and maintain Sakhr OCR; the best Arabic OCR software in the world.

  - ○ Technologies: C++, C#, Windows APIs, MFC.

- ➢ **2004 –** Developed a CRM system using C#, ADO.NET and SQL Server for GBS (*Global Business Solutions Company*) for their day to day use**.**

Interests

- ★ Expanding computer science concepts & techniques especially Machine Learning.

★ Learning new programming languages & building new ones.

★ Crafting high quality software which performs and scales well by applying software engineering disciplines and best practices.

Skills

Technologies:

➢ Web: Vertx, Angular, Drupal, Laravel, Vue.js, ASP.NET MVC, ASP.NET Web API, XML, JSON.

➢ Programming Languages: Java, C++, PHP, JavaScript, C#, .NET, Python.

➢ Database: AWS DynamoDB, Database design and implementation on Microsoft SQL Server, MySQL, SQLite.

➢ Search Engines: ElasticSearch, Apache Solr, Sphinx.

➢ Tools: Git, Git Flow Nginx, InstallShield.

➢ Development Platforms: Linux, Windows, Mac OS, Google App Engine, AWS.

➢ Network: Netty, RESTful APIs, HTTP, WCF, Sockets Programming.

➢ Advanced Windows Programming skills: Multi-Threading, inter-process communication, crash dump analysis and debugging using WinDbg.

➢ Experience developing for NetApp, EMC, and Hitachi NAS devices using C++.

Concepts:

➢ Deep knowledge of Artificial Intelligence, Machine learing, Deep Learning, Computer Vision, and Reinforcement Learning.

➢ Solid understanding of Computer Science concepts *(Algorithms, Data structures, OOP, OOD, Design Patterns & Programming Best Practices)*

➢ Refactoring Legacy Code   ***(Refactored Sakhr OCR – more than 1/2 million lines of code)***

➢ Advanced Windows debugging via Visual Studio and WinDbg (Memory leaks analysis, crash analysis, hang analysis, deadlock analysis, …etc)

➢ Good experience with cloud computing

➢ UML Modeling & Concepts

➢ Compilers programming & strings parsing

➢ Solid understanding of Encryption/Decryption techniques

➢ Solid understanding of Operating Systems techniques

Management, technical interviews, customer relations:

➢ Led small group of developers; including planning, designing, distributing tasks on them.

➢ Responsible for writing/reviewing Requirements Specification and Design Specification documents for projects assigned to my team.

➢ Developed a technical interviewing process in my company, and interviews 10s of developers.

➢ Acted as the technical contact person for my company, several times, when dealing with customer problems, deployments, and partners.

➢ Was awarded employer of the month twice in NTP Software, as well as other awards.

Projects

See www.haggag.net for more details

➢ Acted as the main technical consultant and lead developer in a huge Intel Egypt project for the Saudi Arabian government. The project involved using several technologies: WCF, RFID, C++.

➢ Responsible for maintaining and developing new features for QFS – the main product in NTP Software. As well as other products.

➢ Developed a new version of www.inomics.com using Drupal and PHP.

➢ Developed new features in Sakhr Arabic OCR product.

➢ Developed a simulation program that models the hydraulic and quality behavior of water distribution piping systems. *(a freelance work using MFC) (2006)*

➢ Developed a complete Puzzle Game with multimedia using C#, GDI+ and XML. *(2005)*

➢ Developed a Content Management System using ASP.NET 2.0, C#, Dreamweaver, XML and SQL Server. *(2005)*

➢ Developed a Speech Processing Utility using C#. *(2005)*

➢ Developed a small compiler for the Tiny C Programming Language using C# and parsing techniques. *(2005)*

➢ Developed a full Telemarketing system using C#, ADO.NET and SQL Server 2000 for a company named GBS – *Global Business Solutions Company*. *(2004)*

➢ Helped in the development of a First-Person game (like QUAKE III) using OpenGL & C#. *(2004)*

➢ Developed the AI system for the First-Person game described above using C# –- *Artificial Intelligence for Non-Player Characters.* **(2004)**

➢ Developed Forums system as college project using ASP.NET, C#, ADO.NET and SQL Server 2000. A college project with two colleagues. **(2003)**

➢ Developed *Connect 4* game using C. A college project with a colleague. **(2002)**

➢ Developed simple Registration and Signing in System for a website for my college using CGI/Perl. **(2002)**

Graduation Project

July 2005

Project Name: 3D Interactive Infrastructure for Real-Time/Real-World Simulation.

Grade: 196/200 (Excellent)

Named from the best 3 graduation projects in the year. It is a system for developing 3D Simulation Systems and Video Games that simulates real world visually with all its features; including artificial intelligence system with a scripting engine and many other powerful features.

I was responsible for the AI subsystem research and implementation. My idea was accepted and adopted to the project and proved very successful and later was applied commercially. I've also developed the Input Engine.

Used C# and DirectX