YAZAN GHAFIR

Azure Cloud Solution Architect with AI & ML Expertise, Infrastructure Engineer, Senior Software Development Engineer, Lead, Builder and Enabler, Architecture, DevOps Expert | Microsoft Certified Azure Cloud Solution Architect Expert, DevOps Engineer Expert, Cloud & Full-stack Developer & AI Engineer | Software Engineering Civilingenjör | MSc Data Science and AI - Chalmers

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DETAILS

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Nationality
Swedish

LINKS

LinkedIn profile
Github profile
Stackoverflow profile
Kaggle profile

SKILLS

Microsoft Azure

DevOps

Power Automate

Dynamics 365 CRM

Power BI

C#

.NET Core

JavaEE/JakartaEE

Python

Flask

Bottle

Azure functions

Azure Logic Apps

Azure Event grid

PROFILE

As an IT expert with over 5 years of experience in the Swedish industry, I have had the pleasure of working on a wide range of projects across different areas such as cloud adoption and migration, system integration, fullstack development and DevOps. From pre-sales to implementation, my expertise has led me to work with clients of diverse scales, where I have been able to provide innovative technology solutions while adhering to constraints.

Over the past 3 years, I have been focused on cloud technologies and have helped businesses leverage these services to achieve a competitive edge. My goal is to inspire clients to break from their traditional ways of doing things and embrace modern practices, ultimately helping them achieve their business goals. With my strong leadership, communication, and presentation skills, I am able to collaborate with clients and their IT and business groups to drive success.

I'm also experienced in planning, developing from scratch and deploying AI/ML/Deep Learning systems and services on-prem and on the cloud.

• Multi/Hybrid Cloud solutions Architecture - Azure

• Integration Expert - D365 CRM / Business Central / SalesForse / Configurator

• Dev(Sec)Ops and infrastructure automation - Azure app services/IIS/Linux/Git/TFS/ DevOps/Piplining/Kubernetes

• Cloud Development - Cloud functions, Automation runbooks, Bash, Shell, Power platform

• Full-stack Software Development - C# & .NET/JavaEE/Python/Angular/React/IONIC

• Software architecture - Advanced design patterns and software product line engineering

• Cloud Governance - Active Directory / Conditional Access

• Cloud & On-Premises Security and Compliance - crafting SSO solution from scratch and Token Based internal and API authentication with latest security protocols.

• IT and Cloud cost optimization

• MLOps - Auto ML on Azure

• Deep Learning and Cloud AI services - Azure cognitive services

I'm used to work agile and I'm confident with project management. Over the years I did many fullstack web, mobile and desktop, projects in different domains and in particular I did demonstrating projects in distributed systems, parallel systems, software architecture, e-commerce, data science & AI and software product-line engineering. I am a fast learner person and I have a big passion for problem-solving, possibility creating & leading.

Load balancers

Firewall

Business Central

PyTorch

Tensorflow

Keras

IIS

Azure App Services

Cloud Storage | Azure and AWS

Azure AD

Git

Linux

Docker

Apache Spark

R

Redis

Sklearn

Pandas

Numpy

SQL Server

Postgres

Cosmos DB

AutoML

Computer Vision Services - Azure

Voice Services - Azure

Video Analysis services - Azure

Event Hub - Azure

Bash Scripting

Powershell

Creating Single Sign On solutions

Token based authentication

Azure storage

Azure containers

Artificial Neural Networks

Cloud Architecture

Convolutional Neural Networks

MICROSOFT PROFESSIONAL CERTIFICATES & ACHIEVEMENTS

Microsoft Azure Cloud Solution Architect Expert Certificate

Microsoft Certified: Cloud Infrastructure Designer Expert

Microsoft Certified: Azure Cloud Technologies Expert

Microsoft Certified: DevOps Engineer Expert Certificate

Microsoft Certified: Azure Cloud Developer Associate Certificate

Microsoft Certified: Microsoft Azure AI Engineer Associate Certificate

Microsoft Certified: C# server side professional Programmer

Microsoft Certified: Azure AI Fundamentals Certificate

Microsoft Certified: Azure Fundamentals Certificate

Microsoft Certifications Verification Link
https://learn.microsoft.com/en-us/users/yazanghafir-8111/transcript/d82xkt6epzmyzp2

EMPLOYMENT HISTORY

Cloud Solution Architect at In Process AB, Borås
January 2022 — Present

I'm responsible for architecting, managing identity and policies and implementing and maintaining systems in the cloud. Some achievements and ongoing work include the following:

- I have built a complete Windows Virtual Desktop environment on Azure to host the client's desktop application on host pools, enabling them to run legacy important and heavy desktop applications through a web browser even using a mobile phone and being in a SaaS format.

- I create and manage App services to host our and our clients' web apps with the possibility to scale vertically and horizontally.

- Developing API Integrations to:

    -- Microsoft Dynamics 365 CRM

    -- Microsoft Business Central

    -- Microsoft Power Automate

    -- Microsoft Power Apps

    -- Microsoft Power BI

    -- Salesforce

    -- Customizing the integrated systems as we need, which includes customizing the data model of Microsoft Common Data Service, the UI and developing and installing plug-ins and custom solutions.

    -- Migrating our clients existing on-prem systems to Azure cloud

    -- Create hybrid environment for systems having part of them in the cloud and part on-prem, with maintaining the privacy of data transmission through private VNET, subnets and point-to-point mapping technologies - Patch, deployment, scale and maintenance of Azure SQL databases, Cosmos-db when needed

-- Apply scalability, identity management and governance best practices

Cloud AI - Federated and Swarm Deep Learning Specialist at Zenseact AB - Volvo Cars & AI Sweden, Gothenburg
January 2023 — May 2023

In this project I have leveraged the power and scalability of cloud systems to serve the coordination, consistency and fault-tolerance of AI and ML systems. I also developed the deep learning system itself from scratch on PyTorch framework in Python. I have been developing the Holistic Path AI system which is a deep learning AI system that predicts the path that a vehicle should take while driving in its path and visualize it to the driver at run time. I developed the system in federated and swarm settings, which means that the vehicles will coordinate between themselves using cloud services. I developed event grids, cloud tables and Azure functions that coordinate the whole communication infrastructure. The vehicles don't share their data with a central server but share their models and the models get aggregated either on a central server or in a swarm setting, between the vehicles themselves in a fully distributed manner. The system will be deployed in the AI system at Volvo and Polestar in the coming couple of years.

Integrations Project Manager & Senior Software Engineer at In Process AB, Borås
January 2021 — January 2022

By the work experience and together with my studies in software engineering and data science & AI, I have gained proficiency in problem-solving using graph-algorithms, tree-algorithms, deterministic & stochastic algorithms, parallel and distributed algorithms and machine learning and AI algorithms.

In this role I have both developed and managed integrations and functioned as a senior fullstack software engineer. I worked with the following technologies:

- Azure integration services, like Azure functions, logic apps, and event grids.
- DevOps, Azure AD, Virtual machines, App services, Cosmos db, SQL db, VNET, and many other Azure IaaS, PaaS & SaaS services.
- As a developer, I has been working as onprem & cloud native developer,
- C# .NET framework .NET core as daily programming server-side work, java, JavaEE9/JakartaEE, SpringBoot & Python, flask & bottle as backend technologies,
- React.js, Angular, Typescript, JavaScript, HTML5, CSS, SCSS, SASS as frontend technologies,
- Ionic 5, Java Android as mobile technologies,
- JAVAFX, WPF & C# Microsoft windows forms desktop technologies,
- Microsoft SQL Server, Postgres, SQLite on-prem relational databases,
- Azure SQL Database, Azure Cosmos db nosql as cloud databases,
- Entity framework, Entity framework core as ORM for .net framwork and .net core, Hibernate, JPA java persistent API as ORM for Java Enterprise Edition,
- Bash scripting, powershell scripting, ARM templates, cloud automation, REST APIs and many test frameworks.

Software Development Engineer at In Process AB, Borås
January 2020 — January 2021

Before I join In Process, I passed the senior level programming test that is used to be done for programmers in Gothenburg having +5 years of experience. I got the full points and therefore joined In Process as an intermidiate to senior level full stack programmer and because I had programming experience since before.

I worked as a fullstack software engineer. I was in everywhere in the configurator product code, developing, testing, maintaining, pipelining, building and shipping version after version of the system. I was system responsible for several of our

largest clients like Valmet AB. I designed and implemented system customizations and made deployments and automation solutions both on prem and on the cloud.

Co-Founder & Lead Software Architect at Lawyala, Gothenburg and Dubai
January 2019 — December 2019

I was a co-founder of the start-up Lawyala and the principal software architect and developer for the SaaS & cross-platform mobile app that the company offered. The system I built is a full fledge global video conferencing with lawyers around the world. You could book a video meeting with a lawyer, choose the time and pay in the mobile app as a client. The lawyer has his/her own administration portal to view, manage and edit the meetings and the incoming money and is able to write in availabilities and much more. The system comprises of a scalable web server developed in C#/.NET Core, an extensive Angular web app for lawyer administration, Azure distributed SQL cloud database, IONIC mobile app (ios/android) with a scalable Angular interface, and a public-facing site. I have deployed all systems in a secure and scalable manner on Azure Cloud.
I used the most modern technologies while building the system. I personally wrote more than 300 000 well-written lines of code in the system.

Inventor at Vinnova financed project - Nappi, Gothenburg
August 2018 — January 2019

As a winner in the UppfinnarLotsen program, my idea got accepted and financed by Vinnova. The project was to manufacture a camera in a shape of a pacifier that is used by doctors to examine the throat of mainly children, but also adults, conveniently, easily and without disturbing the patient. The device is to include smart AI system extensions.

Supervisor in Data Structures and Algorithms at Chalmers University of Technology, Gothenburg
March 2019 — June 2019

 I worked as a supervisor in the course LET375 Data Structures and Algorithms

http://www.cse.chalmers.se/~holmer/Kurser/LET3750105/

Supervisor in Object-oriented programming at Chalmers University of Technology, Gothenburg
August 2018 — March 2019

I worked as a supervisor in the course TDA540, TDA552

http://www.cse.chalmers.se/edu/year/2018/course/TDA540/about/

http://www.cse.chalmers.se/edu/year/2018/course/TDA552/about/

Swedish and Math Teacher at Svenljunga Lärcentrum, Svenljunga
October 2015 — June 2017

I worked part-time as a Swedish and Math teacher at Svenljunga Lärcentrum.

🎓 EDUCATION

Software Engineering Civilingenjör, Chalmers University of Technology, Gothenburg
June 2017 — June 2022

Master in Data Science and AI, Chalmers University of Technology, Gothenburg
June 2021 — June 2023

- Distributed Cloud Systems
- Advanced Computer Networking
- Deep Learning

- Applied Machine Learning Algorithms
- Design of AI systems
- Spatial statistics and image analysis
- Image analysis
- Creating technology-based ventures
- Stochastic processes and Bayesian inference
- Nonlinear optimization
- Strategic management of technological innovation
- Data science and AI
- Computer architecture
- High-performance parallel programming
- Natural Language Processing
- Statistical Learning for Big Data

Bachelor's in Software Engineering, Chalmers University of Technology, Gothenburg
June 2017 — June 2020

★ **PROGRAMMING LANGUAGES & SOFTWARE DEVELOPMENT AND AUTOMATION FRAMEWORKS**
Object-oriented as well as functional programming
Fullstack:

* Backend - Expert Level

- C# | .NET | .NET Core | .NET framework - Wrote over 1 million lines of code in these.
- Java Enterprise Edition | Jakarta EE
- Python
- R
- Erlang

* Frontend - Expert Level

- Angular
- Typescript
- Javascript
- HTML | CSS | SCSS | SASS

* Frontend - Intermediate Level

- React

Mobile - Expert Level

- IONIC - Hybrid cross platform
- Android

Desktop - Expert Level

- Microsoft Windows Forms
- WPF
- JavaFX
- Java Swing

Containerization & Deployment - Expert Level

- Azure container instances
- Azure container registry
- Kubernetes
- Docker

- yaml

Scripting

- Bash
- Powershell
- Cmd
- Linux commands
- Azure Cloud Shell

Databases

- SQL - Microsoft SQL Server
- SQL - Postgres
- NoSQL - Azure Cosmos DB

Dependency Injection

- C# - .NET container
- Java - Context dependency injection CDI
- Castle Windsor

Caching

- Redis

AI frameworks

- Spark
- Azure ML Studio
- Azure Auto ML
- Azure Cognitive Services (Experiecend in all of them!)

AI/ML algorithms programming

- Pytorch
- TensorFlow
- Keras
- Sklearn
- Pandas
- Numpy
- Matplotlib and many others

★ PROJECTS

Azure & D365 Single Sign On solution,

I developed a complete Azure based single sign on solution for Combinum configurator. The system is now used by thousands of people interacting with Combinum at daily bases. The system insures seamless login and built-in security mechanism for authentication and authorization of different resources in Combinum based on defined roles in Azure. Also it enables complete managements of users using on central location Azure Active Directory. Some of the companies who are using the system is ABB, Valmet Baling and Aritco Lift.

I Also developed another SSO solution that enables all authorized Dynamics 365 CRM users to be seamlessly and automatically logged in into the configuratior and even configure the products inside the CRM.

System wide JWT token based authentication

I developed a system-wide security solution that completely replaces the legacy cookie based authentication to use jwt. I customized the solution so it suits the business needs of the configurator combinum. I also implemented a full-fledged webhooks solution that works with Power Automate, Azure functions and Azure logic apps.

Large integration between Combinum CPQ and Microsoft Dynamics 365 Sales (CRM)

This is a deep integration between Combinum CPQ and Microsoft Dynamics 365 Sales (CRM). It includes integrating and customizing the deepest building blocks and entities of Dynamics Sales data model. To name a few entities:

- Account

- Lead

- Product / Product revisions

- Quote

- Quote details

- Dynamic Properties of 12 different types

- Dynamic Property instances of 12 different types

- Option sets

- Option set items

- Price level

- Product price level

- Transaction Currency

- Annotations

- Reporting mechanism

- Business rules

and others. The user moves from Dynamics Sales to Combinum CPQ using custom resources at Sales side and configure the quote, quote details using Combinums rule engine with visualization, reporting and advanced pricing features then save and sync the changes to be in both systems.

The integration support creating, editing and removing quote revisions in both systems, advanced pricing where the user can price an individual parameters with different pricing mechanisms. It also includes to create BOM (Bill of materials), advanced reports which at run time creates configurable reports like product manuals and documents for the configured quotes and then synchronized to the Sales environment.

The integration is now used by several companies in Sweden like NAB Solutions AB and several others in Europe.

I contributed more than 60000 lines of code to this project.

Azure - Windows Virtual Desktop (WVD)

I functioned as a leader for R&D and was responsible for the architecture and implementation of the project. It included creating and managing Azure active directory domain services AADDS, Azure active directory, creating the VNET and needed subnets, managing and joining the domain controllers, deploying Windows virtual desktop host pool VM scale set, creating workspaces, creating remote desktop products and publishing them and more. The project allows our clients to easily work on our desktop systems through the web-browser with minimum need of deployment. This enables us to create a complete SaaS solution of Combinum CPQ and to automate the creation and deployment of both desktop and web environments for new clients through cloud shell scripts and automation runbooks.

My AI Assistant

https://myaiassistant.azurewebsites.net/

I have developed My AI Assistant to be an AI as a service (AIaaS) that provides Video AI, Text AI and Voice AI services.

What can this AI accomplish?

* The Video AI helps you doing:

1. Deep search: search any spoken word or any appearing object in any video of any type.
2. Sentiment and emotion analysis of the appearing characters in the video.
3. Face and object detection & recognition for any human face and object appearing in the video.
4. Get the spoken words as a text, translated to many different languages. .... and much more.

* The Text AI provides sentiment analysis for every single sentence in your text. This is particularly helpful for media and content makers where it is important to get external feedback about if the text is neutral or biased.

* The Voice AI converts any text to a spoken voice in 273 different human dialects in many languages and gives you the ability to directly play or download the created voice file. It also converts any voice to a written text instantly. The system is validated business wise to help public speakers, content makers & media with their everyday work activities.

Real-time sign-language translator

Convolutional neural network built using TensorFLow2 that translates images with Sign language acts into written text. I performed deep learning on a deep convolutional neural network so the network translates sign language into text in real-time.

https://github.com/YazanGhafir/SignLanguageTranslator

AI - Semantic Segmentation using self-built and trained deep convolutional neural network of UNET architecture

The project solves the Kaggle competition challenge of doing semantic segmentation of car images (pixel-wise classification).

The kaggle challenge description: "As with any big purchase, full information and transparency are key. While most everyone describes buying a used car as frustrating, it's just as annoying to sell one, especially online. Shoppers want to know everything about the car but they must rely on often blurry pictures and little information, keeping used car sales a largely inefficient, local industry.

Carvana, a successful online used car startup, has seen opportunity to build long term trust with consumers and streamline the online buying process.

An interesting part of their innovation is a custom rotating photo studio that automatically captures and processes 16 standard images of each vehicle in their inventory. While Carvana takes high quality photos, bright reflections and cars with similar colors as the background cause automation errors, which requires a skilled photo editor to change. In this competition, you're challenged to develop an algorithm that automatically removes the photo studio background. This will allow Carvana to superimpose cars on a variety of backgrounds. You'll be analyzing a dataset of photos, covering different vehicles with a wide variety of year, make, and model combinations." Me and Tomas Lundberg constructed our own Deep UNET optimized convolutional neural network and performed deep learning to solve the task. We got in 99.11% accuracy score.

https://colab.research.google.com/drive/19ThXlougOn5dqUkpvk37CXnftquomiuA?usp=sharing

Meeting AI

The tool automates the documentation of meetings and conferences, creates a knowledge base from them, and makes them searchable. It is a desktop AI application that converts spoken speeches in meetings and conferences into written text. It works with more than 90 languages and adds linebreaks, punctuation marks, and sentence formatting automatically when the speaker gets changed.

LowQ - AI hybrid deep learninig neural network classifier

The tool is an industry-competitive classifier that has a high classification accuracy on a very low-quality image dataset. The main component is a deep hybrid structure of state-of-the-art convolutional neural networks together with classical machine learning models combined.

Powerlifting strength coach AI using machine learning methods

An individual's response to a training program varies greatly as factors like genetics and other personal characteristics result in different training adaptations. Therefore it is better to adapt training to an individual's characteristics through a process commonly known as the individualization process. In this thesis we investigate the possibility of automating the individualization process in strength training using machine learning methods. To generate data and test our solution, we create a simulator using the Banister impulse-response model as our basis, which is able to generate large populations of trainees and simulate their training responses. We create a recommendation engine using machine learning models trained on the generated data, which is able to correctly prescribe the optimal training program 78.4% of the time on a simulated population. We also give suggestions for how our work can be extended and improved upon in future work within the domain.

InvoNow

A cloud service that generates invoices on the fly for B2B clients. The Company provides the Excel template of how they want the invoice to look like or they choose from predefined standard invoices where they can include their brand and formatting, and the service creates an API with a key at run time for that company to consume the service. The client API sends a request with json payload of their customer info, order lines, etc and the service returns a PDF with the invoice directly. The service offers also to send the invoices as emails to the customers directly and to log all the events.

Nappi - Innovation Project

New innovative medical equipment that uses Computer vision - AI for diagnosis.

★ **RECOMMENDATIONS ON LINKEDIN**

Ulf Nilsson - Consultant

Yazan Ghafir is a bottomless well of energy and creativity, who generously shares any experience and skill he has mastered. His passion and enthusiasm has helped the company complete impressive projects such as software integrations, upgrades and development. He's sympathetic and service-minded, with a focus on finding the right solution for the customer, as well as those around him.

He is, in short, an indispensable colleague; a bright and a well-needed coworker!

Asif Ali - Frontend Lead

Yazan is very hardworking and extremely talented guy. He has extensive knowledge in software architecture, design and programming. He is well organized and thrived under adversity. We have been working together for three years. He is very goal oriented as well as a team player and was keenly devoted to the work. It's nice working with him.

Kashif Khan - Development Lead

Yazan is a hardworking and very enthusiastic IT professional. We have been working together for almost 3 years. I really enjoy working with him, especially since he has got a lot of hunger and passion for learning new skills and tools. At In-Process, he has demonstrated great analytical and problem solving skills against complex problems and tasks. In the last couple of years, he has worked on a variety of cloud related projects and solutions.