Roberto Prevato

DevOps / Senior Web Developer / Systems Architect

SKILLS

Skill	Level
Azure	●●●●●
Azure DevOps	●●●●●
GitHub	●●●●●
Python	●●●●●
PowerShell	●●●●●
Bicep	●●●●●
Bash	●●●●
.NET	●●●●
ASP.NET Core	●●●●●
C#	●●●●●
TypeScript	●●●●●
JavaScript	●●●●●
Node.js	●●●●●
HTML5	●●●●●
CSS, SASS, Less	●●●●●
Git	●●●●●
SQL, NoSQL	●●●●●
Docker	●●●●
Markdown, UML	●●●●●
pytest	●●●●●
xUnit	●●●●●

CONTACTS

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PROFILE

Since February 2022 I work as Cloud Solutions Architect, in the Cloud Center of Excellence team in Demant. In Demant, which is one of the two leading companies in hearing healthcare, I've been made responsible of the Azure tenant as a whole - meaning that I have the last word in case of disputes regarding how governance should be done in our tenant. I am also one of the main administrators of our Azure DevOps organizations, and our GitHub Enterprise account. In August 2023 I configured personally the integration between our Entra ID tenant and our GitHub Enterprise account with Enterprise Managed Users, and the most important settings of our GitHub account to enable Copilot and Codespaces. In the last months I have worked to implement Azure landing zones and the adoption of the enterprise scale reference architecture from Microsoft in Demant, helping automating things such as creation of Azure subscriptions with consistent tagging, Entra ID groups, eligible assignments and role settings for Entra ID Privileged Identity Management. I am a key contributor in helping following the Well Architected Framework from Microsoft and implementing a Cloud Community of Practice in Demant, working on documentation and knowledge sharing. For example, in the last months I produced documentation and examples to describe a recommended strategy to automate deployments to Azure API Management. In the last months I've been also involved in the use of Azure OpenAI in Demant, and in constant contact with Microsoft to discuss various subjects (Demant signed a partnership with Microsoft). I still work regularly on Infrastructure as Code using YAML Pipelines, Bash, Azure CLI, and PowerShell.

Before the promotion to Cloud Architect position, I built a strong experience in software development and full-stack web development. I am a specialist of web applications, with deep understanding of HTTP web servers, clients, web frameworks, and browsers. I have a generalist profile, with more than 10 years of experience in building back-ends and front-ends. Web development and coding are two of my greatest passions, and

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GitHub

Linkedin

Blog

this is demonstrated by my GitHub profile and employment history.

I am the author of one of today's most performant web frameworks for Python: BlackSheep; proven by TechEmpower benchmarks even since its first implementations. This gave me the opportunity to work part-time with Łukasz Langa (former Python release manager and Python Core Developer) and Yury Selivanov (also Python Core developer), in EdgeDB. The adventure in EdgeDB lasted only 8 months, in 2020, while still working full time for Demant. Good performance in my web framework is achieved using C extensions for Python, and libraries written in C for CPU intensive operations.

During the work in EdgeDB I implemented a Contributor License Agreement (CLA) bot for GitHub, which today is also used by the Python Software Foundation. The source code is visible on GitHub, in the EdgeDB organization. The fact that the CLA bot was adopted by the Python Software Foundation was announced by Yury Selivanov on Twitter.

In the years as Senior DevOps and Cloud Developer in Demant, my main responsibilities at work consisted in building back-ends in Azure Cloud, help defining the global governance for our production services, and best practices to implement, secure, and publish APIs. For Demant I also built a few single page applications (SPAs), including a software distribution platform for Oticon Medical, integrated with both Azure Active Directory (now Entra ID) and Azure Active Directory B2C, and a portal to handle CIAM information (Customer Identity and Access Management).

When building back-ends at work, I code mainly with C# and Microsoft technologies. When coding in the free time, my favorite programming language is Python and my platform of choice is Ubuntu.

When creating new front-ends, I build single page applications. My technology of choice today is Vue.js with TypeScript, and Vite. In the past I also used Angular, React, Knockout.js, Ember, Backbone with Require.js, WebPack, Grunt, Gulp. Before Node.js was first published in 2012, I was already building front-ends using jQuery and plain JavaScript.

The reason why I live in Poland is that I was hired from Italy to work on the new internet banking of mBank. I was hired by Accenture and Avanade because I created a Tetris web application in HTML and JavaScript, and I was considered expert in JavaScript.

DESIRED POSITION

Cloud Architect. Contributing to APIs, DevOps, and Cloud governance. Possibility to work with my favorite technologies: Azure, Python, C#, TypeScript.

EXPERIENCE

Demant Technology Centre   *02/2022 -> current*

Cloud Solution Architect, member of the Cloud Center of Excellence team in Demant. With key responsibilities in the administration and governance of our Azure and Entra ID tenants, our Azure DevOps organizations, and our GitHub Enterprise account.

al. Jana Pawła II 22 – 00-133 Warszawa (Poland)

EdgeDB   *01/2020 -> 08/2020*

Part-time position, on B2B bases, in [EdgeDB](https://github.com/edgedb): a start-up working on a new kind of database. The owners of EdgeDb wanted to hire me full-time, but I couldn't adapt to work with them because of the great time difference. During the 8 months in EdgeDB I learned a lot about Python, I made contributions to the EdgeDB code source to implement typing coverage, and I implemented a CLA Bot for their GitHub organization using Next.js web framework, TypeScript, and EdgeDB.

Demant Technology Centre   *03/2017 -> 02/2022*

Member of IT Cloud and Strategy team of Demant, with role of Senior DevOps and Senior Cloud Developer. Key player in delivering web solutions for the whole company and producing savings. Examples of web applications I developed alone during this job are:

- **HIQMS:** system to store, index, and grant access to QMS documents for the whole company (related to ISO 9000 family compliance). The system comprises of a back-end using ASP.NET Core, Azure Storage to store documents and metadata in the most cost-effective way, Azure Search to index uploaded files and provide search feature, Azure Service Bus for service integrations, Azure Logic App to send email notifications when documents are updated; and a front-end SPA implemented in React, that lets users update documents, upload files, configure a tree view, and download files.
- **Signing Service:** web API to generate digital signatures, using RSA keys stored in Azure Key Vault. Service implemented using ASP.NET Core, integrated with company AAD, published in Azure API Management.
- **OneCustomer:** web API handling end customers information, integrated with Microsoft Graph API and Azure AAD B2C tenants.
- **Account Service:** web service responsible of serving static assets for public facing pages and HTML bodies of emails sent to Demant's end customers, and Universal Links configuration for mobile apps (Android and iOS). This service features complex CI and CD pipelines to generate contents from HTML templates and locales configured in dedicated files, using a dedicated CLI implemented using Python 3, Click, Jinja2, and other libraries.
- **Oticon Medical Software Center** ASP.NET Core API and web portal (React SPA) to handle the software distribution for Oticon Medical.
- **Demant Admin Tool** web portal (React SPA), integrated with the OneCustomer API to handle CIAM (Customer Identity and Access Management) for hearing care professionals working with Demant hearing devices.

al. Jana Pawła II 22 – 00-133 Warszawa (Poland)

Accenture   *03/2014 -> 02/2017*

Architect and tech lead for the creation of web applications and WCF services for Forex exchange and other systems for PKO BP (the biggest bank in Poland). Architect of the integration of PKO BP systems with CERTIS, the Interbank Payment System of Czech National Bank. Development of four web applications, one of which a responsive application for mobile, front-ends, and WCF services. Implementation of automated deployment using GruntJS tasks. Core functionalities like localization strategy, navigation, front end using Knockout library, jQuery, Bootstrap, authorization, security (Antiforgery, Encryption, etc.).

Accenture office in Warsaw, Warsaw Towers ul. Sienna 39 – 00-121 Warszawa (Poland)

Manpower, Avanade, Accenture   *08/2012 -> 03/2014*

Web developer for mBank internet banking spa, JavaScript specialist. Working on the modules AddressBook, Investment Funds, Dashboard, Payments for the mBank new Internet Banking; LiveSearch implementation in Payments module; navigation to Settings pages; implementation of the Facebook integration

Accenture office in Warsaw, Warsaw Towers ul. Sienna 39 00-121 Warszawa (Poland) / Avanade office in Milano (Italy)

Reply, Vodafone   *12/2011 -> 08/2012*

C# and SQL Server desktop development for Vodafone Italy, Italian telephony company, for a GIS application made with Windows Forms. Web development of .NET web applications with ExtNet library. This work involved gathering and maintaining geographical data about GSM and UMTS coverage on Italian territory, Handover data, and other information. Common activities of this job were: development of stored procedures for SQL Server, scheduling jobs to distribute data across linked servers, C# object oriented programming. The main tools used for this job were: Microsoft Visual Studio 2010, Microsoft Visual Studio Team System 2008, SQL Server Management studio, Visual Sourcesafe, Chart FX, Janus GridEx and TatukGIS system.

Cluster Reply, Via Cardinal Massaia 83 – 10147 Torino (Italy)

Rai broadcasting company   *10/2010 -> 12/2011*

Web developer to build applications for Rai Italian national broadcasting company. Using: .NET Framework, VB.NET, JavaScript, HTML, CSS, SQL Server, XML, AJAX, jQuery. Examples of web applications I developerd alone during this job are:

- **Censimento Fonia:** application to manage and maintain Rai telephone numbers information;
- **Scheda Proposta Radio:** application to open, carry on and manage ticket requests about new radiophonic programs;
- **Richieste Diritti:** application to open, carry on and manage ticket requests about transmissions rights.

GFI Italia, Via Mosca 52 – 00142 Roma (earlier), Solgenia Group, Via Mosca 52 – 00142 Roma (later)

ISMB (Istituto Superiore Mario Boella)   *09/2010 -> 02/2011*

Teacher of graphic design and CSS development. Three hours a week lessons of graphic design, CSS, use of the GIMP and Inkscape.

Via Pier Carlo Boggio 61 – 10138 Torino (Italy)

Open Vision   *07/2010 -> 09/2011*

Freelance graphic designer. Job of graphic design to develop contents for e-Learning courses, for Open Vision and Sai Assicurazioni, Italian insurance company.

Via Principe Tommaso 36 bis – 10125 Torino (Italy)

Forma-@ttiva   *04/2010 -> 05/2010*

Teacher of web development Teaching for a 80 hours Web Development base level course (HTML, XHTML, CSS, JavaScript, W3C validated websites, web standards and usability principles).

Via Principe Tommaso 36 bis – 10125 Torino (Italy)

EDUCATION

Politecnico di Torino

Bachelor in Design and Visual Communication (Industrial Design)

Corso Duca degli Abruzzi, 24 10129 Torino, Italy.

CERTIFICATES

- 10/2022 - **Microsoft Certified: Azure Administrator Associate**
- 08/2015 - **Microsoft MCSD: Microsoft Certified Solutions Developer.**
- 08/2015 - **MCSD Programming in C#.**
- 12/2014 - **MCSD Developing Microsoft Azure and Web Services.**
- 06/2014 - **MCSD Developing ASP.NET MVC Web Applications.**
- 10/2013 - **MCSD Programming in HTML5 with JavaScript and CSS3.**

Note: instead of demonstrating my competences collecting more certifications, today I prefer to contribute to Python and Azure communities writing technical articles and publishing code in GitHub under MIT license.

BLOG POSTS

- 07/2019 - [Self-hosted Azure DevOps agents running in Docker](#)
- 06/2019 - [Presenting BlackSheep, one of today's fastest web frameworks for Python](#)
- 10/2018 - [Validating JSON web tokens (JWTs) from Azure AD, in Python](#)
- 08/2018 - [How I created my own media storage in Azure](#)
- 10/2017 - [More about Linux vs Windows hosted ASP NET Core applications in Azure Application Service Plan](#)
- 10/2017 - [Comparing Linux hosted to Windows hosted ASP.NET Core applications in Azure Application Service Plan](#)
- 10/2017 - [Running Docker applications in Azure Application Service Plan](#)
- 10/2017 - [How to run Python PyPy powered web apps in Docker](#)
- 10/2017 - [How to provision Azure resources using Azure CLI 2.0 and ARM templates](#)

- 08/2017 - [Things I would have liked to know about Azure Search](#)

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PROJECTS, OPEN SOURCE CONTRIBUTIONS

BlackSheep

Asynchronous web framework to build event based, non-blocking Python web applications. It is inspired by Flask, ASP.NET Core, and the work by Yury Selivanov. BlackSheep includes a web framework and an implementation of HTTP client, and is ASGI compatible. Originally it included an implementation of HTTP Server, and performed well in the last round of benchmarks from TechEmpower. However, the decision of separating the web framework and making it compatible with ASGI servers is a good one, as it enables focusing on relatively high level features. Two project templates, for MVC architecture and empty APIs, are provided in dedicated repositories.

AzureDevOps-agents

Images for self-hosted DevOps agents running in Docker. These agents use Ubuntu 16.04 and Ubuntu 18.04. Dockerfiles for Python, NET Core, and Node.js workloads are published in the repository.

rodi

Implementation of dependency injection for Python 3, using PEP 484 and naming conventions. Unintrusive api, inspired by NET Core dependency injection.

essentials-configuration

Key-value pair based configuration for Python applications, inspired by the solution implemented to handle configuration in NET Core.

KingTable

Library for administrative tables that are able to build themselves, on the basis of the input data.

jQuery-KingTable

jQuery plugin for administrative tables that are able to build themselves, on the basis of the input data.

DataEntry

Forms validation library that implements Promise based validation of fields and forms, automatic decoration of fields, localized error messages. Integrable with Angular, Backbone, Knockout, React, Vue.js. Examples for use with React and Vue.js are provided in dedicated repositories.

GuardPost

Basic framework to handle authentication and authorization in any kind of Python application, inspired by authentication and authorization in ASP.NET Core.

Gallerist

Classes and methods to handle pictures for the web, using Python Pillow to resize pictures in desired sizes. Gallerist is an abstraction layer on top of Pillow, to simplify the task of resizing original pictures in various sizes, for the web.

Gallerist-AzureStorage

Classes to handle pictures stored in Azure Storage Blob Service with Gallerist.

Gallerist-AzureFunctions

Python Azure Functions v2 to process images for the web. This repository contains a ready-to-use solution to have resizing of pictures in the serverless service offered by Microsoft.

wrktoolbox

wrktoolbox is a tool to run benchmarks with wrk and wrk2, parse and store their results, and generate reports. I provided Dockerfiles to use wrk and wrk2 on Alpine and Ubuntu. wrktoolbox is designed to be used in Docker containers, in services like Azure Container Instances, to run load tests from several locations in the World.

LANGUAGES

- **English** - Fluent
- **Italian** - Native speaker
- **Polish** - Proficient (speaking, reading); Basic (writing)

According to Insights Discovery...

I am an Inspiring Helper (Conscious Wheel Position); Supporting Helper (Less Conscious Wheel Position); all my colors are at similar levels, with dominance of yellow and green. If desired, I can share my Gallup's StrengthsFinder results from 2016 and Insights Discovery results from 2017.