Dr. Jacob W. Archambault

AWS-CERTIFIED DEVOPS DEVELOPER SPECIALIZING IN C# .NET

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EDUCATION

2017	**Ph.D.**, philosophy FORDHAM UNIVERSITY, BRONX, NY

Dissertation: The development of the medieval Parisian account of formal consequence. Director: Professor Gyula Klima. Passed without corrections.

2021	**A.S.**, software development JEFFERSON COMMUNITY AND TECHNICAL COLLEGE, LOUISVILLE, KY

PROFESSIONAL CERTIFICATIONS

March 2024	Microsoft certified: Azure fundamentals
Jan 2024-Jan 2027	AWS certified developer - associate
Dec 2023-Dec 2026	AWS certified solutions architect - associate
Jul 2023-Jan 2027	AWS certified cloud practitioner

EMPLOYMENT

TATA CONSULTANCY SERVICES

Apr 2024-present	Developer TELECOMMUNICATIONS/IVR TEAM

Tested and monitored login systems, load balancer health, database disk usage, call quality, website status and other metrics via monitoring dashboards, PowerShell and SQL Server scripts for Avaya voice-over internet protocol (VoIP) phone systems and related infrastructure for automated interactive voice response (IVR) military health care phone services.

VENMINDER

Feb -Nov 2023	Software Developer II PRODUCTION SUPPORT TEAM

Refactored multiple LINQ-to-SQL queries to prevent timeouts for our largest customers and realize major performance improvements and AWS cost savings after companywide SQL Server-to-PostgreSQL migration. Replaced longer monthly retrospectives with shorter more frequent retrospectives aligned with our weekly release cycle, leading to more consistent follow-through and better cross-department collaboration.

May 2022-Feb 2023	CONTROL ASSESSMENTS TEAM

Created DynamoDB tables via AWS CloudFormation, XUnit .NET unit tests, C# immutable records, sealed request and command handlers, and Typescript Aurelia components for control assessments containerized microservice instantiating CQRS architecture running on AWS ECS Fargate, and added Datadog logging and generic batch update ability to our Dynamo data access library using AWS SDK for .NET.

PETPARTNERS

Oct 2021-May 2022	Associate Software Developer PRODUCTION SUPPORT TEAM

Unified redundant API calls and removed Cartesian explosion from Entity Framework code for premium tracking feature causing slow coverage period loading, leading to a 26X performance improvement. Created Azure DevOps bug template subsequently adopted across entire company, deployed web APIs via Azure DevOps pipelines, and reviewed YAML files for Azure DevOps pipelines updates. Formulated solutions for critical bugs and data fixes in Angular and C# .NET for both customer-facing and internal websites. Implemented and wrote wiki documentation for the company's release process, git workflow, and numerous routine SQL data fixes.

April-Oct 2021   BACKEND TEAM

Created backend logic, C# web API endpoints, and normalized SQL tables via Entity Framework migrations for handling commission payments to subcontracted companies and internal call center agents for new flagship employer-based pet insurance product. Converted SQL stored procedures for retrieving claims, policy losses, and veterinarian information in monolithic application to Entity Framework backend called by web API microservices, and scripted automation of .NET web API publication for local development environments.

WAYSTAR

Jan-April 2021   Software Developer Apprentice   JAVA BOTS TEAM

Fixed bugs in Chrome and Firefox web crawlers obtaining patient payment information from insurance provider websites, written as Java Maven projects using Selenium, working in a trunk-based development workflow with Intellij IDEA and Eclipse IDEs, deployed those fixes to development and production environments with Jenkins, and recorded progress on bugs in kanban system using Jira.

May 2020-April 2021   DEVOPS APPLICATIONS TEAM

Pioneered work converting .NET Framework projects to containerized .NET Core projects running on Docker; co-led company-wide training on using YAML for Azure DevOps pipeline configuration; built, deployed, and configured team projects with Azure DevOps, and set up logging of automated alerts from A10 load balancers to Microsoft Teams and Splunk.

Aug 2019-May 2020   ARCHITECTURE TEAM

Contributed to a company-wide full-stack ASP.NET MVC in-house external applicant testing website with Visual Studio and Git version control, including writing C# code, SQL and Entity Framework LINQ-to-SQL queries, and JavaScript/jQuery functions for DOM manipulation and sending/retrieving server information with AJAX for features allowing teams to add or remove team members and restrict admin access to tests and test templates to their owning teams, added RabbitMQ integration to the project for sending emails, and improved HTML/CSS web accessibility and design responsiveness by adding semantic HTML, media queries, and Flexbox layouts.

SELECT PROGRAMMING PROJECTS

Bash   PYTHON POSTGRESQL TOOLBOX

A Dockerfile and shell script for creating a Fedora Toolbx containerized development environment with Python, Pip, PostgreSQL, and VSCodium, the open-source version of Visual Studio Code, pre-installed.

AWS CLI CONTAINERIZED

A .bashrc file allowing the user to easily execute AWS commands using the containerized version of the AWS command line interface (CLI) with Podman.

Python   POSTGRESQL S3 BACKUP

A command line interface (CLI) tool, written in Python with pytest unit testing and built with pdm, for creating and storing PostgreSQL backups either locally or to an AWS S3 bucket. Includes an accompanying bash script for setting up a containerized test postgresql database and storage volume with Podman.

C#   PERSONAL WEBSITE

A .NET 8 MVC website with links to my programming projects, published papers, resume and CV, deployed to Azure App Service in a Docker Linux container and runnable from a Kubernetes deployment YAML file. Features implemented include partial views and dynamic page content generation, bundling and minification, custom routing, http status code error handling, and Google Analytics.

AUTO LOT MVC STORE

A three-project .NET 5 MVC solution consisting of a website front-end, a data access layer, and a model layer. Makes use of .NET 5 records, razor view components, custom tag helpers, exception filters, custom routing, YAML pipeline configuration with GitHub actions, and LINQ queries over objects linked via entity framework core to a SQL Server relational database. Expanded from a *Pro C# 7* tutorial.

TypeScript, JavaScript, and web development   AURELIA BLOG

An Aurelia TypeScript application implementing a multi-stage build with nginx built on a slimmed-down alpine Docker container image that calls the jsonplaceholder posts API .

Skills

AWS	DynamoDB, CloudFormation, Fargate, ECS, Cloudwatch, S3, IAM, AWS CLI
DevOps	Kubernetes, Podman, Bash, PowerShell, Docker, Jenkins, Trunk-based development
Microsoft Azure	Azure DevOps Pipelines, App Service, Azure DevOps templates, Azure CLI
Python	Flask, PDM, Pip, Pipenv, Pandas, Matplotlib, Jupyter Notebooks
.NET	Blazor, Entity Framework Core, ASP.NET Core, LINQ, xUnit .NET
Databases	DynamoDB, PostgreSQL, SQL Server, MongoDB
Web development	TypeScript, Angular, Aurelia, Node.js, Bootstrap, jQuery, Wordpress
JVM	Intellij Idea, Java, Selenium, JUnit, Maven, JavaFX, Eclipse