

# Dr. Jacob W. Archambault

FULL-STACK DEVOPS ENGINEER

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## EDUCATION

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2021	<b>A.S.</b> , software development	JEFFERSON COMMUNITY AND TECHNICAL COLLEGE, LOUISVILLE, KY
2017	<b>Ph.D.</b> , philosophy Dissertation: The development of the medieval Parisian account of formal consequence. Director: Professor Gyula Klima. Passed without corrections.	FORDHAM UNIVERSITY, BRONX, NY
2011	<b>M.A.</b> , philosophy (cum laude)	UNIVERSITY OF HOUSTON, HOUSTON, TX
2009	<b>B.A.</b> , philosophy (cum laude)	FRANCISCAN UNIVERSITY OF STEUBENVILLE, STEUBENVILLE, OH

## PROFESSIONAL CERTIFICATIONS

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2023	AWS Certified cloud practitioner
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## EMPLOYMENT

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### VENMINDER

Feb 2023-present	<b>Software Developer II</b> After companywide SQL Server to PostgreSQL migration, refactored multiple LINQ-to-SQL queries to prevent timeouts for our largest customers and realize major performance improvements. 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.	PRODUCTION SUPPORT TEAM
May 2022-Feb 2023	Created Typescript Aurelia components, C# immutable records, sealed request and command handlers, Xunit tests, and DynamoDB tables via AWS CloudFormation for control assessments containerized microservice instantiating CQRS architecture, and added generic batch update ability to our Dynamo data access library using AWS' SDK for .NET.	CONTROL ASSESSMENTS TEAM

### PETPARTNERS

Oct 2021-May 2022	<b>Associate Software Developer</b> Consolidated repeat API calls and removed Cartesian explosion for premium tracking feature causing slow coverage period loading, leading to a 26X performance improvement. Wrote wiki documentation for the company's release process, git workflow, and numerous routine bugfixes, and created Azure DevOps bug template subsequently adopted across entire company.	PRODUCTION SUPPORT TEAM
April-Oct 2021	Created backend logic, C# web API endpoints, and normalized SQL tables via EF 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.	BACKEND TEAM

### WAYSTAR

Jan-April 2021	<b>Software Developer Apprentice</b> Fixed bugs in Chrome and Firefox web crawlers, written as Java Maven projects using Selenium, obtaining patient payment information from insurance provider websites. Deployed fixes to development and production environments with Jenkins. Used Jira for project management, SVN for version control, and Eclipse and IntelliJ Idea for IDEs.	RECONDO BOTS TEAM
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May 2020-April 2021

DEVOPS APPLICATIONS TEAM

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

Aug 2019-May 2020

ARCHITECTURE TEAM

Louisville, KY. Contributed to a company-wide full-stack C# .NET framework applicant testing website implementing MVC pattern with Visual Studio and Git version control. Normalized back-end SQL Server databases and application model layer, and wrote database queries both in SQL directly and in C# with LINQ and Entity Framework. Wrote JavaScript/jQuery functions for DOM manipulation and sending/retrieving server information with AJAX, and improved HTML/CSS web accessibility and design responsiveness by adding semantic HTML, media queries, and Flexbox layouts.

## FORDHAM UNIVERSITY

2015-2017

Distinguished research fellow

Bronx, NY. Published numerous articles, book contributions, and an edited volume with publishers including Cambridge University Press, Brill and Springer, secured grants and honors from institutions including the University of Salzburg and the University of St Andrews, and presented papers at prestigious institutions across three continents, primarily in the history and philosophy of logic. For a full list of publications and presentations, see my CV.

## SELECT PROGRAMMING PROJECTS

2019-present

C#

PERSONAL WEBSITE

A .NET 5 MVC website with links to my programming projects, published papers, resume and CV, running in a Docker Linux container. Features implemented include partial views and dynamic page content generation, bundling and minification, custom routing, http status code error handling, and Google Analytics.

2020-present

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.

2021

RECURSIVE FOLDER COPIER

A .NET 5 file I/O application recursively copying files to an output directory based on user prompts for filters by date, regex pattern, number of files to match per subdirectory, making use of a decorator pattern, dependency injection and multiple implementations of a common interface.

2020-present

OWL

FAMILY TREE ONTOLOGY

A growing *ontology*, that is, an organized categorization of reality into various types, detailing my family tree, starting from simple relationships and defining more complex ones in terms of the simpler ones. Written in OWL/RDFS and developed with Protégé ontology editor.

2019

Python/SQL

CPI INDEX ANALYSIS

Code Louisville certification received for completing coursework and Jupyter Notebook project analyzing consumer price index data, demonstrating facility with SQL queries, commands and joins, Python database connections and the pandas and matplotlib libraries for data analysis and visualization.

2021

Java

TRIP REIMBURSEMENT CALCULATOR

A Maven JavaFX application that calculates, then displays meal, travel, and lodging reimbursement amounts based on different maximum daily allotments from user inputs.

2021

SLOT MACHINE GAME

A Maven JavaFX slot machine game that displays per turn and total winnings on each spin, calculated from the player's bet and number of matches.

2021

## EMPLOYEE REFACTOR

A Java tutorial showing through its git history how to convert a tightly coupled application using inheritance and mutable fields into one implementing best practices including strong encapsulation, composition over inheritance, object cohesion, loose coupling, immutability, and dependency injection, via an application printing out information for various types of employees. Includes an extensive README explaining the implemented design decisions.

2021

## Web development

## TYPESCRIPT INCOME TAX CALCULATOR

A front-end application using pure functions in TypeScript to display tax liability from a user's gross income input on a Bootstrap-styled HTML page.

2021

## ANGULAR STUDENT INFO

An Angular and Node.JS CRUD app for updating student midterm and final exam info, retrieved from a MongoDB database via mongoose.

2021

## MONGO TRIP LOG

A node, express, and handlebars application retrieving trip data from a Mongo NoSQL database.

## SKILLS

DevOps      AWS CLOUDFORMATION, DOCKER, AZURE DEVOPS, YAML, GIT, SVN, JIRA, JENKINS, AGILE DEVELOPMENT

C# .NET      ASP.NET CORE, ENTITY FRAMEWORK CORE, LINQ, BLAZOR

Databases      DYNAMODB, POSTGRESQL, DATAGRIP, SQL SERVER, MONGODB

Ontology/Knowledge Engineering      OWL, RDF, PROTÉGÉ, SWRL, SPARQL

Java      GRADLE, MAVEN, JAVA FX, SWING, INTELLIJ IDEA, ECLIPSE

Data analysis      PYTHON, PANDAS, MATPLOTLIB, JUPYTER NOTEBOOKS

Web development      TYPESCRIPT, AURELIA, NODE.JS, HANDLEBARS, JQUERY, AJAX, JSON; CSS, BOOTSTRAP; SEMANTIC HTML, RESPONSIVE WEB DESIGN; CHROME DEV TOOLS, WORDPRESS

## REFERENCES

Roger Loving  
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