Dr. Jacob W. Archambault

Full-stack DevOps engineer

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Education

2021 **A.S.**, software development — Jefferson Commmunity and Technical College, Louisville, KY

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.

2011 **M.A.**, philosophy (cum laude) — University of Houston, Houston, TX

2009 **B.A.**, philosophy (cum laude) — Franciscan University of Steubenville, Steubenville, OH

Employment

Venminder

Feb 2023-present — Software Developer II — Production support team

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.

May 2022-Feb 2023 — Control assessments team

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.

PetPartners

Oct 2021-May 2022 — Associate Software Developer — Production support team

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.

April-Oct 2021 — Backend team

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.

Waystar

Jan-April 2021 — Software Developer Apprentice — Recondo Bots team

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.

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 A10 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.

Highlands Latin School

2017-2018 — Philosophy, Latin, and classics teacher

Louisville, KY. Taught college-level material in Latin, ontology, and classics at advanced private high school. Led ontology students to fully reconstruct arguments and critically explicate texts from Plato, Aristotle, Thomas Aquinas, and others. Led Latin students to translate both from and to Latin, with assignments principally focused on Caesar. By pairing classic texts with carefully designed assignments, I improved student learning outcomes while decreasing student workload, leading 90% of students to earn the highest letter grade available.

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.

AWARDS AND HONORS

2017-2018 Ernst Mach Grant UNIVERSITÄT SALZBURG, INSTITUT FÜR PHILOSOPHIE

9,450 €. Salzburg, Austria. Awarded for project: 'Grounding Logical Consequence'. Supervisor: Prof. Julien Murzi. Financed by the Austrian Agency for International Cooperation in Education and Research (OeAd-GmbH), Centre for International Cooperation & Mobility (Declined).

2016-2017 Alumni dissertation fellowship. FORDHAM UNIVERSITY

$30,450. Granted to aid completing a dissertation in the history of logic, including translations of previously untranslated early medieval logic texts.

2015-2016 Mark and Kathryn Tomasic endowed fellowship. FORDHAM UNIVERSITY

$26,530 and reprieve from teaching responsibilities. Granted for exemplary research in medieval philosophy.

2015 Summer research fellowship. FORDHAM UNIVERSITY

$4,000. Granted for manuscript research project on texts used to teach logic in medieval France.

2014 Visiting postgraduateship ARCHÉ RESEARCH CENTURE, UNIVERSITY OF ST ANDREWS

St Andrews, Scotland. Competitive visiting postgraduateship with University of St Andrew's Arché Research Centre for Language, Logic, Metaphysics and Epistemology. Conducted research supervised by professor Stephen Read on the history and philosophy of logic, presented research at and participated in the centre's weekly colloquia.

SELECT PUBLICATIONS

EDITED VOLUME

2018 1. *Consequences in medieval logic*. *Vivarium* 56:3-4, 201-366.

JOURNAL ARTICLES

2022 2. '13th-14th century theories of inference'. *The Reasoner* 16:4, 31-32.

3. 'Counterpossibles and normal defaults in the *filioque* controversy'. *Logica Universalis* 13:4, 443-455.

2019

4. 'Introduction: consequences in medieval logic'. *Vivarium* 56:3-4, 201-221.

2018

5. 'Consequence and formality in the logic of Walter Burley'. *Vivarium* 56:3-4, 292-319.

6. 'Monotonic and non-monotonic embeddings of Anselm's proof'. *Logica Universalis* 11:1, 121-138.

2017

Conference proceedings

7. 'Mereological hylomorphism and the development of the medieval substitutional account of formal consequence'. In G. Klima and A. Hall (eds.), *Hylomorphism and Mereology: Proceedings for the Society of Medieval Logic and Metaphysics 15* (Cambridge Scholars), 81-103.

2018

Web publications

8. 'Object-oriented programming objects aren't objects'. *Medium.com, programming*. May 11

2019

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9. 'On semantic ambiguity in Anselm of Canterbury's ontological argument'. *Medium.com, philosophy*. May 8.

Skills

DevOps	Docker, Azure DevOps, YAML, Git, SVN, Jira, Jenkins, Agile development
C# .NET	ASP.NET Core, Entity Framework Core, LINQ, Blazor, WPF
SQL	Microsoft SQL Server, SQL Server Management Studio, SQLite, MySQL
Ontology/Knowledge Engineering	OWL, RDF, Protégé, SWRL, SparQL
Java	Gradle, Maven, JavaFX, Swing, Intellij Idea, Eclipse
Data analysis	Python, Pandas, Matplotlib, Jupyter Notebooks
Web development	TypeScript, JavaScript, Node.js, Handlebars, jQuery, AJAX, JSON; CSS, Bootstrap; semantic HTML, responsive web design; Chrome dev tools, WordPress

References

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