Andrea Restle-Lay

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Software Architect

Experienced Software Architect/Developer specializing in building prototypes and product development with a focus on Agile methodologies, Design Thinking, and user feedback. Skilled in modernizing legacy systems and delivering simple yet effective solutions to complex problems through the use of on-premises infrastructure and scalable cloud technologies, leveraging architectures such as microservices, CQRS, and event sourcing.

Areas of Expertise

- Fast proof of concepts to reduce risk of adoption of new technologies
- Experience with writing Azure CI/CD DEVOPS pipelines
- Creation of architecture and designs using ADRs (Architecture Decision Records)
- Effective leadership of teams for Prototyping of (MVP) Minimum Viable Products
- Development of new talent through support, mentoring and meaningful assignments

Technical Skills

SDLC
Agile/SCRUM | 2 week sprints | Kanban

Frameworks
NET 8 | React | React/Native | Docker | Kubernetes | Bare Metal Orchestration

Language
C# | T-SQL | Go | Rust in VS Code and Visual Studio

Cloud
Microsoft Azure | Migration from Cloud to On-Prem

Database
SQL Server | Distributed open-source database technology.

Domains
Hardware Virtualization | Open Telemetry | 3rd Party Accounting & Logistics

Tools
Microsoft Office Suite | GSuite | Jira | GitHub | Kubernetes | GRPC

Professional Experience

Dell Technologies, ISG (Infrastructure Solutions Group) **June 2022 - September 2023**
Principal Software Engineer
Research Triangle Park, NC Software “Dojo” or team developing proof of concepts in observability and software defined hardware virtualization microservices in Linux, Golang, Docker and Kubernetes to optimize Dell data centers communicating over GRPC (Google Remote Procedure Calls) and REST APIs.

- Designed a distributed database architecture to support a clustered High Availability infrastructure effort to enable a custom control plane to seamlessly adapt to changes in Dell hardware availability without a separate management server.
- Contributed to a Pan-Dell OTEL (Open Telemetry) Commonality initiative including enhancing the above infrastructure to improve Observability with tracing instrumentation, and custom exporters to assist Dell Service Engineers, this included an OTEL receiver that exported hardware configuration receiver, allowing Dell software downstream to understand system topology and correlate events and errors from internal and customer based data center.
- Recruited and led a six-person team that became finalists in the 2023 ISG Hackathon, where we developed a proposal for powering the edge with solar and lithium-sulfur batteries, avoiding the use of fossil fuels and conflict minerals such as Cobalt.
- Throughout the year, I've worked closely with cross-functional teams, collaborating on strategic initiatives, researching new technologies, and sharing knowledge with colleagues. My passion for mentorship and teamwork, along with my technical expertise, has allowed me to make a significant impact at Dell.

Relias Learning, Morrisville, NC **February 2021 - June 2022**
Mobile Full-Stack .NET React/Native Software Engineer,
Contributed to an Agile team to develop a mobile learning platform to accreditate home health care workers in remote and hospital settings, so our learners can maintain and upgrade their licenses on convenient personal cell phones and corporately owned tablets.

- Researched and implemented an Azure DevOps CI/CD pipeline to deploy the backend before moving to Full-Stack React/Native development to work on Front-End development.
- Redesigned and implemented a C# API utilizing the existing .NET Entity Framework and new SQL Stored Procedures into a backend RESTful API to allow loading courses and grading exams in 200 milliseconds or less after previous frontend implementation failed QA.

Dairy Records, NCSU College of Agriculture, Raleigh, NC **February 2015 - February 2021**
C# .NET Full-Stack Software Engineer
Oversaw development of first and third-party pricing and billing system using C# .NET stack with SQL databases. Designed and implemented a custom rules engine to read transactional data and generate analytical data. Migrated legacy Cobol pricing programs into this custom rules engine and wrote a new WPF program to allow graphical editing of prices.

- Migrated Cobol generated text and pdf based financial reports into DRMS-branded multi-page Microsoft Excel reports allowing filtering, sorting, etc as needed. Adapted existing customer facing WinForms applications to evolve with the new pricing engine.
- Created UIs to modify pricing, add new products, and automate generation and distribution of custom excel reports from sql databases to teams around the world involved with the support of farms, labs, technicians, accountants.
- The above tools enabled this small non-profit to transition off a unstable, opaque, largely manual monthly payroll and invoicing hybrid cloud (Azure) system that generated text-based ascii and pdf reports into an automatic nightly process providing both branded Excel spreadsheets with built-in formatting, filtering and sorting for internal and customer use, as well as SQL Analysis tables for complex yearly budgeting.

Owens & Minor, Raleigh, NC **October 2013 - February 2015**
RedPrairie/Healthcare Logistics Software Engineer
Supported and developed warehouse management / inventory control / labor management/ Parcel software supporting three 3rd party (unowned inventory) at sixty Owens & Minor (owned inventory) warehouses throughout the US supporting a range of worldwide clients.

RedPrairie/JDA Software, Cary, NC **November 2008 - July 2013**

Sr. Software Engineer/Transportation Logistics

Analyzed requirements, design, develop, document, test and deliver customer specific enhancements to Transportation Management products. Customers were typically high volume time sensitive companies in the fields of perishable groceries (ALDI, Food Lion), and specialty items (Godiva Chocolate, Fresh Express) with requirements such as taking into account road and weather conditions, local holidays and strict delivery schedules.

- Served as Team lead for successful implementation of genetic algorithm to find shortest route for customer specific, unusually long, round trip truck routes inserting empty truck “legs” to maintain continuity and bring the driver back to his home base. Lowered transportation costs 15% resulting in a saving of ~$2 million transportation costs per year.

Education

Master of Arts in Computer Science, Business, Design Thinking, Communication
NCSU (North Carolina State University): Interdisciplinary Studies

B.A. Computer Science/Minor in Biology
UMaine

Continuing Education utilizing online platforms such as LinkedIn Learning