

Zachary Delaney

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Skills

Languages: Python, RPGLE, SQL, DB2, PHP, JavaScript,

Frameworks: Django, Flask, YAJL, HSSFR4, Unittest, scikit, Pytorch, HPC, MPI, DB2

Experience

Information Systems Lab, Team Lead Researcher – 10/2023 – Present

- Developed strong detection pipelines, researched, and applied machine learning libraries, and worked in conjunction with intelligence communities to improve the accuracy and efficiency of object identification processes.
- Worked on parallel machine learning programs on an HPC cluster to improve detection efficiency.
- Developed machine learning pipelines and methodologies in collaboration with the Department of Homeland Security (DHS), including the creation of synthetic data to train models, leading to better diagnosis for domestic problems.
- Conducted UNC Rad ONC research for detecting anomalies with AI.
- Utilized Linux environments extensively for development, data processing, and deployment of machine learning workflows, including managing and submitting jobs on HPC clusters to optimize computational efficiency.

Sullivans Inc, Software and IT – 11/2021 – 06/2025

- Developed and implemented API and EDI integrations to facilitate smooth data exchange between diverse systems, leveraging Python, RPGLE, and JavaScript, resulting in improved operational efficiency and data accuracy.
- Played a key role in the creation of CI/CD pipelines and comprehensive documentation, streamlining development processes and significantly enhancing overall team efficiency and project delivery speed.
- Designed and developed customized reports using advanced software solutions, transforming intricate data into actionable insights, which drove informed decision-making across the organization.
- Contributed to the development of a streamlined order processing process, enhancing efficiency by 15%, leading to faster fulfillment and improved customer satisfaction.
- Developed processes and assisted in the automation of distribution warehouse integration with third-party systems, creating pipelines for seamless order flow and system automation.
- Built APIs to streamline the flow of data from container-level to truck-specific product allocation, enabling faster response to seasonal and spike demand fluctuations.
- Maintained and updated an iOS application built with Appcelerator Titanium, supporting PHP-based endpoints that communicated with IBM i (AS/400) using CGIDEV2 programs to deliver real-time business data to mobile users.
- Performed IBM i (AS/400) administration tasks, including managing user profiles, job queues, output queues, and system values to maintain stable and secure operations.
- Applied and managed PTFs (Program Temporary Fixes) to ensure IBM i system reliability and compliance with vendor recommendations.
- Administered DB2 on IBM i, performing routine maintenance, monitoring performance, scheduling backups, and ensuring data integrity for mission-critical applications.

ABS-SCA, Software and IT Lead – 02/2017 – 11/2021

- Led development of a backend automation application using Python, Headless JS, and Selenium, reducing client onboarding time by 90%.
- Directed design and deployment of a full-stack Flask application on Windows IIS, automating data mapping and entry with Pandas, cutting future data-entry program needs by 80%.
- Supervised development of a command-line letter generation program integrating IBM i and RPGLE, achieving 10% daily cost savings on vendor communications.
- Oversaw creation of an internal REST API enabling secure communication between IBM i and Windows servers, improving critical business logic integration.
- Managed Windows Server administration, including user accounts, IIS configuration, and security updates to ensure system stability.
- Provided technical support for internal users, troubleshooting hardware, software, and networking issues to maintain reliable daily operations.

- Administered DB2 databases on IBM i (AS/400), performing maintenance, monitoring performance, managing backup procedures, and applying PTFs (Program Temporary Fixes) for system updates and stability.
- Coordinated team workflows, task assignments, and project timelines to deliver integrated software and IT infrastructure solutions.

Education

Georgia Institute of Technology – MS in Computer Science-	2027
Fayetteville State University – BS in Computer Science-	2024