

Andrew Manigault, PhD

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PROFESSIONAL SUMMARY

Software Engineer with 3 years of experience building, testing, and maintaining scalable software solutions. Skilled in R, Python, SQL, JavaScript, C#, and tools such as Docker, Shiny, and React. Known for strong problem-solving abilities, effective cross-functional collaboration, and a focus on performance and code quality in agile environments. My approach is shaped by 10 years of research experience, fostering an ownership mindset, independent work habits, and the ability to translate complex technical concepts into clear, accessible language.

RELEVANT EXPERIENCE

Inductive Health Informatics	Jan 2023 – Present
<i>Software Engineer II</i>	<i>Atlanta, GA</i>
<ul style="list-style-type: none">Developed containerized tools/applications and software packages aimed at monitoring data quality for the National Syndromic Surveillance Program (NSSP)—a CDC branch that ingests high volume (~88% of emergency departments across the USA) HL7 health data for surveillance tasks.Improved NSSP operations by 1) easing access/use of data quality tools, 2) enhancing sharing of syndromic surveillance reports, 3) allowing CDC leadership to monitor utilization of tools/resource across the platform.Successfully maintained and added features to large suite of legacy NSSP web applications.Refactored legacy application backend to improve load times (~9x on average) and followed object-oriented design patterns (e.g., dependency injection) that significantly eased operation and maintenance tasks.Trained machine-learning forecasting models to estimate upcoming changes in disease rates based on seasonality.	
Brown University – Center for the Study of Children at Risk	Sep 2021 – Jan 2023
<i>Biostatistician</i>	<i>Providence, RI</i>
<ul style="list-style-type: none">Developed R packages to support research center activities including infant cry acoustic analysis, latent growth curve modeling, multilevel modeling, data cleaning and visualization.Trained machine learning classifiers to identify neonatal opioid withdrawal syndrome using infant cry acoustics.	
University of California Los Angeles	Sep 2020 – Dec 2021
<i>Post-doctoral Research Fellow</i>	<i>Los Angeles, CA</i>
<ul style="list-style-type: none">Developed R package to perform multi-threaded transcriptomic origin analysis.	

SKILLS

Programming Languages	R Python SQL html CSS JavaScript C# Bash SAS MATLAB
Technologies	Linux Docker/Podman AWS Git Palantir Foundry Unity
Analytic	Bayesian & Frequentist Statistics Machine Learning Multilevel Modeling

NOTABLE PROJECTS

Laboratory Analytics for Situational Awareness & Reporting (LASAR)	Jan 2025 – Present
<i>Full-stack developer</i> (frontend: html, CSS, JavaScript; backend: R, Python, SQL)	<i>Atlanta, GA</i>
<ul style="list-style-type: none">Developed a web application to track incoming laboratory data quality issues.Developed/maintained nightly ETL to refresh SQL tables containing key data quality metrics.Mentored a junior developer through development of UI, use of version control, and deployment of containerized web applications via Podman/Docker.Ported application frontend/backend to Palantir Foundry for CDC leadership to evaluate platform capabilities.	
Data Products Analytic Dashboard (DPAD)	Sept 2024 – Dec 2024
<i>Full-stack developer</i> (frontend: html, CSS, JavaScript; backend: R, Python, SQL)	<i>Atlanta, GA</i>
<ul style="list-style-type: none">Developed backend to log user activities across multiple frontend applications via Flask REST API.Developed containerized web application to summarize user activity across the platform and export activity reports.	
Data Quality On Demand (DQOD)	Sept 2023 – Present
<i>Frontend developer</i> (frontend: html, CSS, JavaScript; backend: R, SQL)	<i>Atlanta, GA</i>
<ul style="list-style-type: none">Developed web application to generate highly granular/customizable .xlsx data quality reports via stored procedure calls to SQL Server DB.	
Publication and Reporting Enterprise for Syndromic Surveillance (PRESS)	Jan 2023 – Present
<i>Frontend developer</i> (frontend: html, CSS, JavaScript; backend: R, Python, SQL)	<i>Atlanta, GA</i>
<ul style="list-style-type: none">Developed web application frontend to search/browse, upload, and manage syndromic surveillance reports.Leveraged Flask REST API backend to allow full automation of app actions (e.g., uploads and updates) via cron jobs.	
Hexpow	May 2021 – Jan 2022
<i>Mobile Application developer</i> (C# Unity app)	<i>Providence, RI</i>
<ul style="list-style-type: none">Developed C# mobile game built in Unity and released it on the Google Play Store.	

EDUCATION

Doctorate – Experimental Health Psychology (Psychoneuroendocrinology & Statistics focus)	Sep 2016 – May 2020
<i>Ohio University</i>	<i>Athens, OH</i>
Masters of Science - Experimental Health Psychology (Psychoneuroendocrinology & Statistics focus)	Sep 2014 – May 2016
<i>Ohio University</i>	<i>Athens, OH</i>
Bachelor of Science – Psychology	Sep 2010 – May 2014
<i>Montana State University</i>	<i>Bozeman, MT</i>