Riley Fox

Junior Software Engineer
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Profile Summary

- Accomplished Software Engineer with over a year of experience delivering highly visible and complex projects within fast-paced environments.
- Talented Full-Stack Developer with strong competencies in programming languages (Python, C#, JavaScript), frameworks (Node.js, React, Express.js), and cloud services (Google Cloud Platform, Terraform).
- Engaged collaborator with strong interpersonal skills, able to influence and align multiple teams with conflicting priorities to drive progress under aggressive time constraints.
- Able to effectively navigate ambiguity, complexity and change when stakes and pressure are high, and lead without authority to overcome obstacles and ensure delivery.

Education

Middle Tennessee State University B.B.A. in Information Systems **Murfreesboro, TN** 2017-2022
GPA: 3.4/4.0 **Coursework:** Data Structures, Algorithms, Database Systems, Web Development, Object-Oriented Programming, Statistics, Data Visualizations.

Technical Skills

Languages: Python, C#, JavaScript, SQL, HTML & CSS
Frameworks & Libraries: Node.js, React, Express.js, Redux, Entity Framework, Bootstrap
Databases: PostgreSQL, Entity Framework, BigQuery, Highmark Health
Dev Tools: Git, GitHub, Visual Studio Code
Cloud & DevOps: Google Cloud Platform, Terraform
Concepts & Methodologies: Object-Oriented Programming, Data Structures, Algorithms, MVC Architecture, REST APIs, CRUD Operations, Agile and Scrum Methodologies

Professional Experience

Highmark Health Big Data & Cloud Administrator **Remote** May 2022 - Aug. 2022

- Steered the team towards proficient use of Linux and Terraform in designing product-aligned configurations utilizing Linux and Terraform.
- Collaborated within a pluridisciplinary team including Security, Cloud Operations and Database teams, maintaining a close communication and asking calibrated questions to remove bottlenecks and reach alignment.
- Defined technical requirements and designed a scalable, speedy system architecture, employing Linux and Terraform to exceed product standards, resulting in precise software that meets user needs.
- Managed and rejuvenated database information leading to an increase in performance by reducing load times.
- Authored Terraform configuration scripts to establish empty BigQuery and Postgres datasets, tailored for modification by clients and initiated through Gitlab
- Conducted rigorous testing and monitoring of essential database features as specified by the team, and adjusted Terraform scripts as needed
- Collaborated extensively with various internal teams, primarily security, to ensure company compliance was maintained for the implementation of required features.
- Engaged meticulously in Agile/Scrum methodology, the implementation of daily standups and bi-weekly sprints fostered a cohesive team dynamic, boosted productivity, and instigated significant improvements in the overall project management framework.
- Administered staff training on various aspects including computer usage, software understanding, and application development, resulting in enhanced team efficiency and smoother project execution.
- Engaged in continuous learning and professional development, staying abreast of emerging technologies and industry trends, ensuring the incorporation of cutting-edge tools and techniques in the cloud architecture.

Business Economic Research Center Student Research (intern) **Murfreesboro, TN** May 2021 - Aug. 2022

- Collaborated with stakeholders and UI/UX designers to build the USDATAP.ORG website using JavaScript, HTML, CSS, Cassandra, and WordPress.
- Optimized and troubleshot SQL queries using Cassandra for data cultivation and cleansing, restructuring and deleting 65% of redundant queries to improve database performance.

Projects Experience

Visual Pathing Algorithms

Jun. 2023 - Jul. 2023

- Developed a dynamic pathfinding visualization tool using Python, Flask and React, enhancing understanding of pathfinding algorithms and their applications.
- Implemented robust error handling and state management using React Hooks, improving user experience and software reliability.
- Optimized performance for large-scale grids with advanced React rendering optimization, ensuring seamless user experience and decreasing load times.
- Created interactive UI/UX elements allowing users to customize start/end points and obstacles, increasing user engagement and exploration of various pathfinding scenarios.
- Constructed a Flask API with CORS handling for seamless communication between the front-end and the back-end.
- Incorporated BFS and A* pathfinding algorithms, enabling dynamic changes to pathfinding strategies based on user inputs.

Sorting Algorithms Visualizer

May 2023

- Developed a comprehensive sorting algorithm visualizer using React, integrating state management with hooks like useState and useEffect, which helped to provide an interactive user experience.
- Incorporated an assortment of sorting algorithms such as Bubble Sort, Quick Sort, Merge Sort, and Selection Sort, demonstrating a deep understanding of algorithm implementation and performance evaluation.
- Implemented application's performance tracking utilizing web-vitals library, aiding in identifying and rectifying potential performance bottlenecks.
- Utilized modern web technologies to develop a progressive web app, including the utilization of a manifest file for app metadata and offline functionality, providing an improved user experience.

MGO Capstone Project

Nov. 2022 - Dec. 2022

- Developed a full-stack web application using C#, MVC, Bootstrap, and Entity Framework in alignment with stakeholder requirements.
- Created Employee, Category, Item, and Home MVCs using the MVC framework, enabling well-structured software modules and an optimized request-response cycle.
- Leveraged Entity Framework for database seeding and executing CRUD operations, ensuring efficient database design and manipulation.
- Employed middleware to manage the application's request-response cycle, enhancing system integration strategy and achieving a steady application uptime.