
EXPERIENCE**LeapPoint***Backend Developer*

Remote

Jan 2023 – Present

- Optimized content management systems for Fortune 500 corporations by applying industry best practices
- Developed a configurable workflow to automate the propagation of metadata across a 150+ terabyte library
- Automated the archival of assets by developing a configurable scheduler that queries and triggers workflows
- Provided users with an interface to manage storyboards by using asynchronous JavaScript for CRUD operations
- Automated user group access control for new asset collections by programmatically enforcing policy rules

Altra*Software Developer*

Remote

Jan 2022 – Dec 2023

- Maintained internal tools for accelerating client-work by fixing issues, fielding questions, and managing contributors
- Designed a sample project based on common feature requests to prepare new developers for client work
- Accelerated data retrieval for content authors by making an application that converts form data into query strings
- Introduced new and relevant web development technologies, sharing insights and training team members
- Analyzed client requirements in discovery sessions, defining project scope, user stories, and actionable tasks

Michigan Institute for Data Science*Research Assistant*

Ann Arbor, MI

May 2021 – Jan 2022

- Developed a full stack application for a Native American education department to share opportunities with students
- Secured \$50,000 in funding, establishing a reusable model to promote data sovereignty for underserved communities
- Designed a dashboard to view student data and analyze learning outcomes by collaborating with administrators
- Prioritized privacy and security by implementing a strong password strategy that utilized cryptographic hashing
- Consolidated, validated, and migrated student data from various sources to a cloud-hosted document store
- Managed and documented process of deploying to a cloud application platform to improve maintainability

PROJECTS**Pathfinding Solution with Respect to Movement Costs***github.com/stavguo/pico-saga*

- Architected a lightweight game engine, fitting pathfinding, AI, and rendering systems into a 64kb memory footprint
- Implemented a custom pathfinding solution, enabling agent navigation across procedurally generated terrain
- Designed a finite state machine to manage complex entity behaviors and game-state logic to improve code clarity

Synthesizing Realistic Urban Road Networks*github.com/stavguo/obb-parcelling*

- Increased realism in simulating urban environments by creating an interactive program to subdivide city blocks
- Recursively split polygons based on their minimum bounding box to concisely solve the block subdivision problem

Markdown-Driven Content Management System*gustavo.zip*

- Developed a portfolio website that leverages Go's templating language to convert Markdown to rendered HTML
- Documented research projects, personal endeavors, interview insights, and other topics to track personal growth

Unique ID Generator using Prime Numbers*tinyurl.com/2ezsvrsp*

- Implemented the segmented sieve of Eratosthenes algorithm to efficiently generate unique identification numbers
- Extracted substrings from concatenated prime numbers calculated by sieving a range of numbers in segments

SKILLS**Languages:** C, C++, C#, CSS, Go, HTML, Java, JavaScript, Python, SQL, TypeScript**Frameworks & Tools:** AEM, Azure DevOps, Docker, Express.js, Git, MongoDB, Node.js, PostgreSQL, React, REST APIs**Cloud & Deployment:** AWS Lambda, Azure, GCP**Libraries & Testing:** Axios, Bootstrap, Jest, JUnit, Mockito, Redux

EDUCATION**University of Michigan***Bachelor of Science in Computer Science*

Ann Arbor, MI

Sept 2018 – Dec 2021