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PROFESSIONAL EXPERIENCE

Nav Technologies, Inc.   *August 2022 - Present*
Senior Software Engineer
- Develops and maintains business critical services in a distributed microservice architecture
- Responsible for lending and credit services including feature development, testing, deployments, and service health
- Responsible for full stack development with an emphasis on back-end services in both Golang and Elixir

Systems & Software   *July 2021 - August 2022*
Full Stack Software Engineer/Support Analyst
- Develops and maintains business critical software for water, gas, and electric utilities
- Responsible for full stack development and customer support, including customer specific projects
- Develops and maintains central billing related software, supporting both back and front end processes

Power Fusion Media   *January 2021 - July 2021*
Lead Software Developer
- Develops, architects, and maintains business critical and internal software
- Responsible for full stack development, emphasis on back end technologies
- Develops scalable processes for large data flows, including data analysis, visualization, and automation
- Manages remote contractors, including requirements, code reviews, and deployment
- Manages and maintains database infrastructure, including performance optimizations, and reports generation

Terbine - The Global Exchange for IoT Data   *Contractor, November 2018 - January 2021*
Data Linker
- Develops and links real time data feeds into the continuous ingestion system
- Develops and maintains back-end infrastructure for scalable distributed data ingestion and processing, including database infrastructure
- Develops data visualizations based on archival and continuous data feeds
- Enables handling of exotic file types, file manipulation, and large static data files

Data Searcher
- Responsible for exploration of new IoT data sources and feeds to be ingested into the system
- Ensures individual feeds adhere to the Metadata Specifications, and that all ancillary information is reviewed

INDUSTRY PROJECTS

enQuesta Application

The enQuesta application is a cloud-based CIS solution for utilities covering customer billing, device management, customer engagement, and much more. My expertise centered around Cobol and Java development of central billing services, as well as bill print and front-end web page design and support. I also targeted improvement of infrastructure level code in C and Perl during my time at Systems & Software to further enhance compile times and run-time reliability.

Ingestion API

The Terbine Ingestion API is designed to function as the middle man between independent programs orchestrated by Apache Airflow that collect data, and multiple PostgreSQL database connections. This API was built with Golang.

Airflow Ingestion Cluster

The Airflow Ingestion Cluster is designed to fetch and process data from a multitude of public data sources using Docker based web scrapers, where this data is sent to the Terbine Ingestion API for storage. This cluster was built with Apache Airflow and Docker, where the web scrapers were built using Python, Golang, and Bash.

IoT Data Visualizations
github.com/thenick775/terbine_visualizations

These projects are an interactive way to view and analyze data from a multitude of physical sensors located around the world using data sourced from within Terbine. The individual visualizations were constructed using JavaScript, Jupyter-Notebooks, D3, Kepler.gl, and Leaflet. These visualizations were previously featured on the main Terbine website.

PUBLIC PROJECTS

Quorum iOS Transpilation
github.com/thenick775/Quorum_iOS_Transpiliation

This project was the culmination of my senior design, where RoboVM was re-integrated into the Quorum development toolchain, allowing Quorum to run on iOS devices. This feature was taken from development to beta testing, where the architecture and code modifications used here were integrated into Quorum Studio's source under the "Send to iOS" button, automating the process. This integration allowed Quorum to extend its reach into a market where it is needed the most, and is now included in the official Quorum Studio 3.0 and Quorum 9.0 release!

Metroidvania
github.com/thenick775/metroidvaniafangame

This project is a small game written in Objective-C that utilizes features from Spritekit, GameplayKit, AVAudioPlayer, and JSTileMap. I have written all of the event driven animation scheme, collision detection, character physics, data storage schemes, and game logic.

Browser Based Gameboy Advance
github.com/thenick775/gbajs3

This was a fun exercise in browser agnostic GBA emulation. My goal was to make a Gameboy Advance emulator available on iOS, circumventing some of the problems of emulation on this platform. This was built on top of gbajs, offering several feature upgrades such as PWA support, as well as a modern UI. Currently this project is entirely built in JavaScript, HTML, and utilizes a back-end service built in Golang.

TheList Utility
github.com/thenick775/thelist

This cross platform project is an app used to make fast, searchable, in memory sets of lists. I built this as I had a need for searching lists by regular expression, and found no utility already serving this purpose. Fyne was used for the application display and packaging, where this project is featured in the Fyne Application Showcase.

EDUCATION

Bachelor of Science, Computer Science | *Class of Dec 2020*
University of Nevada Las Vegas | *GPA: 3.79*
Honors: | *Cum Laude*

RELEVANT SKILLS

Languages: Golang, Elixir, Python, Bash, Objective-C, C, Java, JavaScript, Cobol, Matlab, R
Related Technologies: Docker, Kubernetes, Amazon Web Services (AWS), Apache Airflow, Django, Nginx, Selenium, D3, Git, PostgreSQL, MySQL, MariaDB