DUSTIN MORRIS

SOFTWARE ENGINEER

CONTACT

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SOFTWARE SKILLS

Languages
Javascript (ES6+), Python, MatLab
Java

Front end
React, Redux, jQuery, D3, HTML5, CSS3

Back end
NodeJS, Express, Docker, Linux, Bash, NGINX

IoT
Node-RED, Mosquitto

Databases
mySQL, Mongo, Postgres, Arango, Redis

Testing
Jest, Enzyme, Puppeteer, Mocha/Chai, K6, loader.io

Cloud
AWS EC2/S3, CircleCI

EDUCATION

SOFTWARE ENGINEERING
TLG Learning
2020

SOFTWARE ENGINEERING
Galvanize
2020

SYSTEMS ENGINEERING
Master of Science
Naval Postgraduate School
2014

SECONDARY EDUCATION
Bachelor of Science
Oklahoma State University
2006

SOFTWARE PROGRAMS

VULNERABLE SAFETY

https://github.com/dwmorris11/vulnerable-safety

Sensor monitoring software with remote SMS notifications and alarms to reduce injury of children and pets in hot vehicles.

- Chose and utilized MQTT ***Mosquitto*** broker and ***Node-RED*** for rapid development (<1 hour) of ***Internet of Things*** microcontroller software with remote network capabilities
- Stored relevant sensor data in ***Redis*** Time Series database for rapid insertion, retrieval, and controllable persistence
- Sent SMS messages based on alarm thresholds of sensor data to notify parents of impending danger

INSPIRED TRAVEL

https://github.com/Seattle-Cartographers/bestNearby_Dustin

Production level scaling a legacy travel sales application.

- Increased fault tolerance and reduced system degradation by horizontally scaling using ***NGINX*** load balancer
- Stress tested, identified bottlenecks, and optimized both locally with ***K6*** and ***loader.io*** testing suites to achieve > 1000 rps on 10 million records
- Benchmarked relational (***Postgres***) and non-relational databases (***Arango***) as part of engineering and business decisions to determine best fit database for the use case

RAPID ACOUSTIC ANALYSIS TOOL (*U.S. Patent #10539655*)

Automatic real-time underwater target identification for military sonar operators in land, sea, and air domains.

- Rapidly prototyped a novel algorithm using ***Excel*** to process narrow band acoustic signatures using open source spectrograms
- Translated the algorithm to ***MatLab*** using classified spectrograms with a simple user interface
- Tested algorithm against real spectrograms with results greater than 90% target identification of known sources
- Developed algorithm high level steps (process video, noise reduction, target identification) using the ***systems engineering 'V' process***

PROFESSIONAL EXPERIENCE

U.S. Navy (2007-2017)

Engineering Duty Officer

- Mitigated flooding and fire risks as the ship safety council chairman between 300+ scheduled daily depot level maintenance tasks
- Lead and coordinated a team of 200+ for safely docking multi-billion-dollar submarines, aircraft carriers, surface ships, and barges as a qualified dry-docking officer
- Managed a team of 5 as the deputy nuclear assistant project superintendent to coordinate high risk depot level maintenance on shipboard nuclear reactors