

MARC LABELLE

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Self-motivated and highly adaptable problem solver with a Master of Science in Physics and experience in multiple facets of software engineering, including web development, DevOps, military safety critical systems, mobile development, test automation, and RF systems engineering. Skilled at analyzing problems and finding solutions in a variety of languages. Proven ability to lead and work in a result-oriented team and meet demanding time goals. Strong written communication skills with experience developing technical proposals and documents.



EXPERIENCE

STAFF SOFTWARE ENGINEER, R&D | ACV AUCTIONS Mar 2023 - Present

Responsible for creating ground-up, business focused solutions to complex problems.

- Developed scalable Elasticsearch service to efficiently match machine learning outputs with vehicle arbitration issues
- Architected configuration-as-code deployment of Tyk gateway with CI/CD testing to quickly and safely expose APIs while tracking changes
- Championed K8s implementation of SaltStack with an API wrapper and Nexus to securely manage embedded system OTA updates
- Architected event driven ML backend to run multiple inference models based on combinations of event streams utilizing Kafka
- Patent US 2023/0360667 A1: Multi-sensor Devices And Systems For Evaluating Vehicle Conditions

LEAD SOFTWARE ENGINEER, R&D | ACV AUCTIONS Sep 2021 - Mar 2023

Led cross-functional team developing microservices, ML systems, mobile apps, and embedded solutions, managing contractors and support.

- Lead and mentored team of backend, iOS engineers, contractors, and university students in all aspects of product development
- Designed and developed API microservices with Django, FastAPI, Postgres, MySQL, Docker, Kafka, Kubernetes, and Jenkins
- Developed iOS and embedded computer vision algorithms to automatically crop undercarriage images using OpenCV
- Developed embedded linux audio and sensor logger; data used by ML models to reduce arbitration, \$1M/yr savings
- Converted legacy SQLServer database from merger to MySQL and SQLite, integrating with backend and mobile
- Drafted software and test requirements documents for contractor deliverables

SENIOR ENGINEER | NSWC INDIAN HEAD, EOD DIVISION Oct 2017 - Nov 2019

Lead developer responsible for several multiple programs, including web development, embedded analysis and physics modeling.

- Lead full-stack and devops developer, building applications for processing intelligence reports and analyzing data
- Developed and managed agile workflows, providing monthly reports and metrics to the sponsor using C3 for data visualizations
- Static and dynamic binary code analysis of safety-critical embedded devices to find bugs, vulnerabilities, and verify program/data flow
- Computational modeling explosive effects of EOD and Counter-IED methods/devices to develop, test, and verify their effectiveness
- Patent US 10,921,089 B1: Shaped Charges for Focusing a Fluid Mass

ENGINEER | NSWC INDIAN HEAD Jul 2009 - Sep 2017

Developed automated test sets, embedded software, and data analysis software for weapons systems.

- Lead designer and developer of automated test systems for counter radio-controlled improvised explosive device CREW system
- Tested various systems including RF signals, communications, system timings, and electrical properties
- Identified and developed custom Counter-IED solutions for EOD technicians using PIC, Atmel, Arduino, Embedded C and Assembly
- Developed multiple workflow automation applications to reduce turn-around times by up to 50%
- Worked with contracts and external vendors to expand and develop concepts and designs, performing testing and acceptance reviews
- Developed embedded data acquisition logger software that recorded various real-time test data streams simultaneously

EDUCATION

MASTER OF SCIENCE (ASTROPHYSICS CONCENTRATION) | NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY May 2009
BACHELOR OF PHYSICS (EXPERIMENTAL CONCENTRATION) | STATE UNIVERSITY OF NEW YORK AT FREDONIA May 2007