Haley K McMurray
+1 971 482 8194
+47 9222 1486 (SMS first pls)
haleydc@gmail.com | haleykm.com
linkedin.com/in/haley-mcmurray-984495166/

Summary
Well rounded senior programmer with experience in telecom and aviation industries. Strong mathematical skills with background in signal analysis and transforms. Excellent debugging skills guarantee that anything the team builds will be reliable. Experience building distributed simulation systems in C/C++.

Job Skills
- 20 years Experience

Electrical Engineer Training - Thompson Learning Corp   2021-2024

Principal Software Engineer - Minuendo, AS   2020-2024
- Architect of device firmware and docking station
- Acoustic Monitoring Firmware
  - STM32 - Create low power acoustic monitoring firmware.
  - Real-time USB data visualization.
  - BTE based data sync with cloud.
  - Custom bootloader with encrypted firmware update.
  - Low power consumption (8uA) audio filtering on 3 channels.
- Docking Station
  - ESP32 and SAMD21
  - Assembly level debugging of RTOS and custom components and drivers.
  - USB host to collect logged data and cloud sync.

Startup/Founder Software Engineer - ModEngine   2011-2019
- GLSL/webGL Rendering Suite
  - Front End extension for ModEngine
  - WebGL Manager implemented in JS
  - Flexible shader integration
  - Custom shaders and particle engine
  - GL rendering suite connects to ModEngine as a data cluster.
    - WebHosting (AWS or Apache) connects to server cluster with websocket
    - Support for TCP/IP based webSockets added to cluster capabilities
    - Native support for websockets written in C/C++
    - Handles SHA security handshake for html based protocols

- Founder of ModEngine
  - A framework for building and interacting with network protocols
    - Covers TCP/IP UDP/IP and Raw Ethernet (winpcap, mbed)
    - Framework can import libraries for C/C++ to add additional support
  - Tracks network optimization across nodes
  - Flexible protocol design with mock up language
  - Mock up language generates dynamic libraries as linux .so files
  - Applications of this system include Big Data, Server Clusters and Mmo/Moba Game Dev
  - Built in tools for optimizing: Logic, Network encode/decode.

Rockwell Collins, Inc.   Dec 2007-2011
Sr Software Engineer - C/C++ Developer
Commercial Flight Simulation Dept.

- Using C/C++ and working with the "Core Sim" group; designed and implemented a networking framework and API to provide publish/subscribe interface to simulation elements.
- Networking interface supports flexible frequencies and can convert between synchronous and async elements.
- Avionics IO board interfaced to network API via distributed IO module.
- Distributed snapshot, record/replay, debrief and 'flyout' design. System included a discrepancy checking system to notify the user of the control positions.
- Simulated displays back end. Jitter free video transport over IP.

AdTran, Inc.   Jun 2002-2007
Software Engineer C/C++ Developer

- Working close to hardware with C++ and ASM.
- Optimizing and debugging networking protocols.
- Embedded web server with tinyTCL.
- Bandwidth Management Systems and Topology.
- Redundancy Systems.

Education

- BS in Computer Engineering from Clemson University
- Graduate with Honors, Magna Kum Laude
- Senior project in Computer Vision
- Course specialization in Random Signal Analysis and Transforms

References

- Stian Håland - Electrical Engineer   Minuendo,AS   +47 4821 4544
- Frank Andersen - VP of Engineering   Minuendo,AS   +47 9718 0348
- Olav Kvaløy - Chief Scientist Audiology Minuendo,AS   +47 9824 5170