Ajibola Onaopemipo

Fullstack Web Developer

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SOFTWARE ENGINEERING EXPERIENCE

Software Architect   2019 —
Senior Software Engineer   2018 — 2019
Dolphin Interconnect Solutions

Contributed to the SmartIO framework for high-performance, distributed I/O and resource sharing, in PCIe shared-memory clusters. Gained experience with PCIe, non-transparent bridging, cluster interconnects, RDMA, distributed shared-memory architectures, NVMe, GPU programming, Nvidia GPUDirect, driver development and Linux kernel hacking.

- Contributed to the design, implementation and evaluation of SmartIO.
- Created a distributed device driver for simultaneous sharing of a non-SR-IOV NVMe among multiple hosts in a cluster.
- Implemented Linux KVM hypervisor support using VFIO mediated device drivers for assigning remote physical devices to VMs (pass-through).
- Developed a storage framework based on SmartIO and GPUDirect, providing zero-copy raw block access to NVMes from multiple GPUs in the cluster without involving CPU in the data path.
- Developed various DMA and RDMA cluster benchmarking tools.

Software Developer   2014 — 2015
Bridgetech

Worked with online analysis of digital video over network. Got experience with video encoding, PIM-SM multicasting, MPEG streams, working with C++ in an embedded environment, and real-time network traffic analysis.

- Contributed to an MPEG transport stream parser for the VB288 content extractor using libpcap for live capturing IPTV (MPEG-DASH).
- Implemented a parser for MPEG-2 and MPEG-4/AVC video streams in order to extract and validate CEA608/708 closed captioning data and provide real-time event notifications.

Software Development Engineer (Web Back-end)   2013 — 2014
Fotoware

Worked mainly with FotoWeb, a web-based image and video archiving system with full-text metadata search and workflows based on metadata tags. Gained experience working with Apache2, MongoDB, web caches, designing REST services from the ground up, and creating HTTP endpoints with C++ (FastCGI) and Python (Flask).

- Implemented a hierarchical metadata taxonomy tree that supported CRUD operations and assignment to assets of tens of thousands of metadata tags within milliseconds.
- Created a configurable workflow engine allowing users to create custom pipelines and workloads for processing assets based on metadata tags.
- Made a background job scheduler with support for webhooks and asynchronous message-passing as well as bulk file operations.
- Implemented both back-end and front-end for exporting assets to an external CMS and an access management UI for these exports.

EDUCATION

BSc, Engineering   2017 — 2023
University of Lagos
Bachelor's degree in mechanical engineering.

SKILLS

Programming Languages – Python, Javascript, Typescript, C, C++, C#, MATLAB, Mathematica, Nim

Frontend, Backend & Databases – React, Bootstrap, Redux, Appollo, HTML, CSS, Express, Node, REST, GraphQL, Nextjs, Flask, MongoDB, SQL

Development Environments – Vim, Visual Studio Code, NPM, Yarn, Babel, Webpack

Operating System – Linux, Ricing, Virtual Machines, Command-line tools

Others – Unit testing (jest), Version Control (git), Algorithms/Data structures, CI/CD, Networking, Art/Design, Hacking/CTFs, Creative problem solving skills

CERTIFICATES

- FullstackOpen Fullstack
- FullstackOpen GraphQl
- FullstackOpen TypeScript
- FullstackOpen Docker
- FullstackOpen CI/CD
- HackerRank React Basic
- HackerRank Python Basic
- HackerRank JavaScript Basic