
1900 O'Farrell Street, Suite 240 + San Mateo + California 94403 +

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Michele Gayoba-Sloan + 650.638.9712 + michele.sloan@originateresources.com

Candidate – Skandar Balasunderam
Opportunity – Storage Software Engineer

Technical Skills

Languages: C / C++, assembly coding, GTK, Python
OS: Linux (pthreads – multi-threaded coding, multi-core programming)
Tools: gcc, gdb, make, RPMs, Automake, Autoconf
Protocols: Sockets API (client/server - TCP/IP), IPv4 / IPv6, H323(VoIP)
Version Control: SVN, CVS, ClearCase
RTOS: pSOS, VxWorks (Tornado)

Work History

Linux Software Engineer	(Symmetricom)	2007-2008
• Configure, customize and build kernel and driver modules		
• Create flash based Linux system including vmlinux, initrd and libraries		
• Integrate Netxen 10 G card device driver.		
• Performance tuning for high bandwidth 10 G networking		
• Device driver code to handle Ethernet frames, parse and filter IPv6 packets by-passing stack		
• Application coding to handle multicast media (MPEG) flows and aggregation.		
• Custom network interface metrics similar to ethtool.		
• Python and RPM based custom installer for software as well as configuring database replication		
• Raid 10 system configuration for high systems with PAE kernel.		
Ascendent Systems		2006 to 2006
Software Engineer		
• Dialogic System Release APIs, Communications Service Framework(CSF), C++		
• Implemented a prototype to receive voice and fax calls on a single DID (Direct Inward Dialing) number		
Monte Vista		
Software Engineer (Contracting)		2002-2005
• Programming in C, environment uCLinux and Suse		
• Ported OpenBSD ISAKMPD to uCLinux on MMU less Samsung 4530 micro-controller - specifically the start-up phase		
• Start-up time of minutes was reduced to few seconds		
• Changed data structures, linked-lists, reduced mallocs and frees to compensate for issues related to memory allocation		
• Set up VPN/IPsec tunnels with hash and crypto algorithms 3DES, AES, SHA1, MD5		
• Programming in C, environment Redhat Enterprise Linux		
• Ported all Resilience changes to Linux kernel and driver modules from RedHat Linux version 2.4.9-31 to 2.4.9-49 for a High Availability (HA) appliance platform		
• Implemented algorithm to monitor network interface link and status and perform failover		
• Programming in C, environment Redhat Linux 7.3, 9.0, RPMs and Python		
• Partly kept internal MontaVista kernel synchronized with Open source community		
• Wrote RPM spec files and built rpm packages for various Userland application packages for the MontaVista Linux distribution		
• Customized the installer for MeetingPlace Express (Cisco's Web Conferencing Software).		
• Customized Red Hat's Firstboot		
• Customized GUI, functionality, flow control, display and instructional text.		
• Environment Red Hat Enterprise Linux and RPM		

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- Programming in C / C++, Visual Studio, Tornado IDE, environment RTOS VxWorks and Windows.
- Integrate third party protocol stack with VxWorks, Tornado IDE and VxDOM (Wind Rivers's DCOM implementation) - OPC (Ole for Process Control) protocol.
- API for DeviceNet – a device level protocol on Control Area Network (CAN).

Ericsson, Research & Development, Menlo Park, CA 2000 to 2001
Software Engineer

- Programming in C, environment RTOS pSOS, embedded development
- Implemented alternate gatekeeper functionality (subset of ITU-H323 specification) for WebSwitch
- RAS signaling, Radvision C API, Implemented new C API within Radvision protocol stack.
- Implemented Hotline and delayed Hotline functionality for WebSwitch to pre-configure and setup calls.
- Call signaling, Finite State Machines, Data Structures, PSTN, T1, E1 and ISDN interfaces.
- Interfaced with Telogy's voice processing module for VoIP - G.711 G.723, G.729.
- Implemented parts of new media manager for end-point to end-point media streaming.
- Wrote pre-studies, function specification and implementation proposal.
- Implemented call forwarding busy and call forwarding no answer.

Other Projects

Assembly language for DSP56000 and Digital Signal Processing

- Wrote DSP56000 assembly code to implement low, high and band pass digital filters
- Assembly coding to perform interpolation, decimation and FIR filters
- Implemented FFT butterfly algorithms in DSP56000 assembly code for spectrum analysis

Assembly language for 68HC11 and Weather Station design

- Built a 68HC11 micro-controller based system that recorded pressure, wind and humidity.
- Wrote 68HC11 assembly code for transducer theoretical equation calculations to interpolate actual readings and to display results.
- Assembly code for mini stack with push and pop routines.

Two Pass Assembler

- Designed and implemented a two pass assembler.
- Responsible for opcode and symbol table and for algorithm to handle extended format, normal, PC relative, Base relative and indirect addressing.
- Used Hashed Linked lists for tables.
- Programming in C, Linux.

TCP/IP packet transfer (emulate)

- Used large files and sockets to emulate TCP/IP layered protocol.
- Fragmented large files into packets, calculated checksum and used sockets to send to destination.
- Performed three way handshake, reassembled at destination and corrected for errors.



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- Programming in C, Linux/Unix Boagle program
- Implemented an algorithm to search for all possible words in a 4x4 grid of letters.
- Used recursion and linked list for the algorithm.

Automobile position monitor

- Obtained coordinates from a GPS receiver (Simulated).
- Transferred coordinates over the network using socket interface (TCP/IP) to an Arcview (Global Information system-GIS) server.
- Wrote Avenue, an object oriented language for Arcview, to display coordinates on a virtual map.

Education

Bachelor of Engineering (Electrical), Ryerson University. Toronto, Ontario, Canada.