SHIRISH BASKARAN

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Software development professional with a strong technical foundation, diverse interests and a proven track record of delivery; interested in learning new skills by taking up challenging assignments in new problem domains

RELEVANT SKILLS

- System architecture, design and optimisation; problem solving; debugging; team leadership
- C (proficient); Python, Makefiles (competent); C++, Shell scripting, Assembly, Java, R (novice)
- Familiarity with debuggers, profilers, network sniffers, logic analysers and various other tools of the trade

WORK EXPERIENCE

Team Lead, BlackBerry OS / Wireless Groups
February 2012 - January 2014 (2 years)

- Led a team that integrated a new Wi-Fi chipset on BlackBerry10
  - Managed project team of 5-7, with 3 direct reports; spread across multiple development sites
  - Managed relationship with chipset vendor and worked together to implement and support:
    - RF hardware calibration and validation at the factory
    - Station mode, Mobile Hotspot and Wi-Fi Direct/P2P functionality including Miracast/Wi-Fi Display
    - Product Wi-Fi Alliance certification
  - *Key Accomplishments:*
    - Championed and established processes for effective joint development with vendor
    - Achieved fastest productization of a new Wi-Fi chipset on a BlackBerry phone, with KPIs (throughput, power, driver stability) meeting or exceeding mature solutions

- Led a team that designed the telephony middleware components on BlackBerry10
  - Managed project team of 8-10, with 5 direct reports; majority were new to QNX and C development
  - Designed and delivered a critical system service with high reliability requirements which provided:
    - A framework to support call control, call history and settings for multiple phone "lines"
    - Implementation of a cellular phone "line" as per requirements from carriers and certification bodies
    - API for clients which included the Phone dialer application and utilities for phone number manipulation
  - Coordinated with various stakeholder teams to define interfaces and track scheduling for dependencies
  - *Key Accomplishments:*
    - Successfully staged deliverables to aggressively enable alpha, pre-certification and field testing
    - Mentored and built an effective agile team whose "definition of done" set a high quality bar

- Across projects:
  - Remained an active developer resource on all projects
  - Exposed to agile methodologies and adopted principles from Scrum & Kanban that suited projects
  - Emphasised software quality; established clear coding guidelines; thorough design and code reviews and use of wikis, continuous integration, unit and functional testing tools
  - Represented team at cross-functional and executive status meetings
  - Hiring and employee performance management

Software Developer, QNX Platform Team
February 2011 - February 2012 (1 year 1 month)

- Implemented various projects on the nascent PlayBook/BlackBerry10 platform
  - Basic Facebook functionality (get friend list, post to wall) for a native application demo

- ○ Driver for a tunable capacitance controller (STHVDAC-303) for a hardware team prototype
  - ○ Networking functionality on a BlackBerry JVM on PlayBook email over Wi-Fi demo
  - ○ Messaging, SMTP functionality on Personal Information Manager (PIM) prototype on PlayBook

- ● From July 2011 took on responsibility for the telephony middleware project mentioned before

Software Developer, WLAN Radio & IP Transport
June 2008 - February 2011 (2 years 9 months)

WLAN Protocols & Firmware Developer, Intern
May 2006 - August 2007 (1 year 4 months)

- ● Maintained the core Wi-Fi stack and ported vendor network drivers to the BlackBerry RTOS
- ● Built strong knowledge and understanding of IEEE 802.11 standards and IPv4 networking
- ● Implemented features for power management, quality of service, call admission control, regulatory domain, DNS, DHCP, connection and scan management touching all layers of the stack
- ● Debugged network connectivity and Wi-Fi interoperability issues reported in the field
- ● Profiled and optimised stack for CPU utilisation, throughput and battery life performance
- ● Mentored students and new employees and delivered Wi-Fi training to remote product development sites
- ● *Key Accomplishments:*
  - ○ Ported the core Wi-Fi and VPN stacks to the Qualcomm REX OS to support CDMA device variants
    - ■ Created an abstraction layer between the stack and OS/platform services
    - ■ Bridged the BB and QC network driver interfaces with a zero-copy buffer translation scheme
  - ○ Led product development on several BlackBerry phones, from hardware bring-up of chipsets to supporting Wi-Fi Alliance certification programs

EDUCATION

B.Eng Honours Electrical Engineering – Internship Program, 2002-2008
McGill University, Montreal, Canada
CGPA 3.44/4.0

Electives
- ● Microprocessor Systems, Computer Architecture, Operating Systems, Artificial Intelligence, Signal Processing Hardware, Computer Graphics, Telecom Network Architecture, Macroeconomic Theory, Global Climate Change

Selected Projects
- ● Honours Thesis: Hardware acceleration of Particle Systems using Cell Broadband Engine (2007-2008)
- ● Artificial Intelligence: [1] Offline Signature Verification Using Virtual Support Vector Machines [2] AI game-playing agent for a game similar to Reversi (2006)

Other Involvement
- ● Part-time jobs at McGill Environment Health & Safety Office (2003-2006) and Campus Recreation (2004-2007)
- ● Course Tutor, taught a course on C programming for undergraduate students run by McGill IEEE Student Branch (2008)

HOBBIES & INTERESTS

- ● Self development and continuous learning; taken MOOCs ranging from Data Analysis to Economic Policymaking
- ● Fan of fantasy and science fiction books; webcomics; film, music festivals and British TV shows
- ● Travel and adventure; took a year off to travel and seek out thrilling and rejuvenating experiences around the world, from snorkelling around remote islands in Palawan, Philippines to hurtling down sand dunes in Swakopmund, Namibia