



Tejbir Wason

Computer Engineering – with Software Engineering Option

TECHNICAL SKILLS

Languages/Development Tools

- C, C++
- Ruby on Rails
- Java
- Perl
- Node.js
- Tcl/Tk

Operating Systems

- UNIX/Linux
- OS X
- Android
- Solaris
- Debian
- Raspbian

Software Design Environment

- Embedded Android
- Android SDK
- Assembly x86_64
- Assembly Motorola 68k, 8051
- MATLAB/Octave
- VHDL Design

TECHNICAL WORK EXPERIENCE

QE Test Platform Development Engineer, Intern *Broadcom Corporation, Richmond BC, Canada*

May 2013- Dec 2013 (8 months)

- Developed automated test scripts in Python and Perl to perform quality tests on Broadcom SOC (System-On-Chip) enabled mobile devices, tablets and set-top boxes
- Constructed extensive test cases, defined test parameters, ran tests-suites on devices and reported results to Mobile Platform Solution teams in India, United States, Taiwan, and Denmark.
- Shortened the product shipment timeline by a cumulative of 5 weeks in 4 different major client projects
- Analyzed kernel-layer and Embedded Android-layer logs to investigate system termination and stress issues
- Performed in-depth FLT (first level triage) on logs and created bug reports using JIRA and ClearQuest
- Streamlined set up procedure for new lab test platforms and lab equipment by customizing TCP/IP connections
- Mentored incoming interns and provided training workshops on internal software infrastructure, script development and proprietary tools setup.

Systems Engineering Trainee *Bhakra Beas Management Board, Nangal, India*

May 2012- Aug 2012 (4 months)

- Participated in a comprehensive on-site study of the hydroelectric power generation and transmission network at one of the highest gravity dams in the world
- Maintained current knowledge of SCADA - Supervisory Control and Data Acquisition System used to actively gather, process and display status of the grid monitoring devices
- Analyzed operating problems and complexities associated with large-scale automated power distribution systems
- Collaborated in development of miniature model of national transmission lines; presented model at the annual IEEE Power India Conference in New Delhi

ENTREPRENEURIAL WORK EXPERIENCE

Co-Founder / Operations Strategy Lead *Xerocopy Limited, Chandigarh, India*

Aug 2010 – May 2011 (10 months)

- Started a company that generated 5-figure monthly profit; established strong 25-account client base of commercial businesses and contractors
- Identified through market research, potential competitive advantage opportunity in an ad-driven photocopy service
- Designed and administered primary research surveys to gauge interest in the new venture. Directed marketing efforts to promote visibility and introduce a new form of advertisement
- Conducted thorough A/B testing to optimize advertising structure and achieve perfect product-market fit
- Collaborated cross-functionally with sales, finance and human resources teams to develop multi-site communication and operations strategy
- Produced 80% of all new business in 2011 through referrals by fostered excellent client relationships built on trust
- Trained and supervised 15 staff members prior to being placed on a client facing role

TECHNICAL PROJECTS

Global mapping with NASA Earth Terrain Database

Oct 2012 - Dec 2012

- Developed C++ code to interpret Earth's terrain data to create a detailed visual elevation map of Earth by analyzing a large set of binary encoded data
- Optimized code to reduce run-time by 40% by using multi-dimensional arrays to calculate key Earth statistics
- Designed prediction algorithm to extract images of specific points on Earth through targeted coordinate positioning by implementing object-oriented abstraction principles
- Implemented and tested addition features including a user customizable color palette to depict changes in elevation, live map showing parts of Earth in daylight and parts in darkness, for a perfect project marking score.

Advanced Digital Multimeter

Oct 2012 – Nov 2012

- Contributed in developing the logic design of high resolution digital multimeter in VHDL; eliminated 15% of code with a top-down design approach while enhancing overall functionality and speed
- Received perfect score; showcased project at University Fair to future undergraduate students
- Planned daily activities for group members as group leader; streamlined tasks to increase team efficiency
- Moderated group meetings to set weekly objectives, track overall progress and ensure on-time completion of project deliverables.

Software Automation of Pill Dispenser for Bottling Plant

Sept 2012 – Oct 2012

- Designed a Moore model state machine in VHDL to coordinate major components of a pill dispenser
- Optimized subroutines and registers to reduce memory-usage by 20% while boosting time performance
- Conducted detailed testing throughout life cycle to improve hourly productivity of bottling plant by 25%
- Tackled a steep learning curve to quickly learn and assimilate knowledge on state machine automation
- Eliminated design errors by implementing an additional layer of schematic design on top of VHDL code.

ACADEMIC AND CO-OP STATUS

Academic Program

- Software Engineering option; 4 of 8 academic terms completed; **GPA 4.0/4.33**
- Anticipated date of graduation: May, 2016

Co-op Status

- Completed 2/5 work terms; available for 4 months beginning May 2014

AWARDS

UBC TREK Excellence Scholarship

2013, 2012

- Academic scholarship awarded to top 5% students in first and second year engineering program

Dean's Honour List

2013, 2012

- Academic scholarship awarded for achieving a sessional average of at least 80% while taking more than 30 credits

Outstanding International Student Award

Sept 2011

- Academic scholarship awarded to meritorious international students entering undergraduate study at UBC

VOLUNTEER WORK EXPERIENCE

Co-Founder / Treasurer

Sept 2011 - Present

UBC Golf Club, University Golf Course, Vancouver

- Initiated the constitution of a club for golf-enthusiasts; lobbied inside the Student Administrative Commission to receive an initial club welfare fund
- Successfully constituted the club; drafted a 3-year budget plan setting objectives for annual membership sales
- Introduced cost controls and streamlined budget planning for club events to reverse negative cash flow within three months of inception; operating budget rose by 85% within next four months
- Planned and executed two golf tournaments in association with the TheFirstTee™ youth golf program; raised \$3000 with all proceeds going to charity.
- Negotiated with University Golf Course officials for discounts on green fees and practice balls for members

Teaching Volunteer

May 2009 – Jan 2011

Bhakra Beas Management Board, Nangal, India

- Contributed 150 hours of quality teaching service in primary schools of rural Nangal
- Coordinated and participated in special outreach programs to promote general hygiene among children aged 8-13
- Spearheaded creation of a volunteer manual to help future volunteer on-boarding process