

Michael J. Langford

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INTERESTS:

Systems Programming, Text Processing, Firmware and Cross Language Library Support and Development

TECHNICAL SKILLS:

Programming Languages: C, Python, C++, Expect, Java, VB/VBA and Assembly.
Broad Experience (Firmware/OS/Driver/Library/Application/Simulation/Scripting/Translation).
Learns new tools quickly (Smalltalk, SQL, GNU-Tools, COTS Software, lex, yacc, Lisp, SWIG, Profilers).
MS-Windows, Embedded/Desktop/Server Linux use and programming,, X-Windows GUI programming.
Proficient with make, svn, cvs, gdb, virtualization (VmWare), unix tools, ticket tracking, and automatic builds.

NON-TECHNICAL SKILLS:

Supervising technical progress and other programming personnel
Self-motivated learning, utilizing outside resources to educate myself.
Discrete at handling Classified/Proprietary Information: Have held Secret Security Clearance.

EXPERIENCE:

Software Consultant and President, Rowdy Labs, Nov 2006-Present

Cable set top box RTSP client integration/development
[Zip Code Data Visualizer](#) using mod_python and Google Maps API
GA 400-Traffic Screen Scraper and Travel Time Estimator
Amazon Wish List Simplifier and Viewer for Openwave Cell Phone Browser
Google Calendar Agenda Integration from Openwave Cell Phone Browser

Embedded Software Engineer [Consultant], Tier One Design, May 2007-Nov 2007

Ported Linux 2.6.20.11 to a custom PXA270 design, modification required to ethernet, 8250 serial and MMC
Created embedded touch screen driver for Linux 2.4.33.3 as well as calibration utility
Created embedded toolchain and root filesystem for PXA270 Linux design
Ported stomach acidity testing .NET 2003 C#/C++ application to .NET 2005 and updated app for reliability.
Created firmware/software/custom Linux driver for a high performance multi-port serial device based on a ST711. Various models function over Current Loop, RS232 and RS485 using windows IDE and debug tools.

Embedded Software Engineer[Contractor], Confocus Technologies, March 2006-May 2007

Ported Opera Web Browser for Linux Devices 8.5 to Sigma Envision Linux set top box platform
Ported ANT Galio Web Browser to Broadcom 97401 Linux set top box platforms
Created network updating bootloader for Linux set top box platform and verification plan
Created watchdog kernel modules utilizing hardware capabilities for reset.
Created automated non-volatile memory layout mechanism, ameliorating hundreds of arbitrary code constants
Automated a 75 minute build for Sigma Designs toolset each engineer performs every few weeks
Created remote debug scheme using gdbserver, and distributed howtos to other engineers

Research Scientist, Georgia Tech Research Institute, ITTL, October 2003-March 2006

Created relocatable assembly and designed and implemented emulator of 147 instruction proprietary processor using cross platform C++ and MS Windows MFC GUI
Created tool to allow audiovisual manual correlation of recorded radio traffic in large test scenarios
Created test to correlate quality of H263 streaming video to packet loss rate for Polycomm video phones
Created software using Expect automation and bash scripting to automate major portions of video tests
Upgraded Federated Simulation Development Kit(FDK) RTI to new HLA specification for Windows and Unix build environments.

Student Assistant, Georgia Tech Research Institute, ELSYS, August 2000-October 2003

Created robotic driver code to work with new model of robot (iRobot's ATRV)
Implemented a Manchester encoder/decoder on a programmable logic device using VHDL on Xilinx CPLD
Designed initial low-level schematics of a bi-directional active RF inventory tracking tag
Designed and built automated test harness using PIC micros and LabView
Wrote Hitachi H8/300 microcontroller firmware to interface to on-board embedded components using Windows IDE and JTAG debugger/programmer.
Developed embedded code (Intel micro) for ID-2554 radar threat display
Created LabWindows graphic upload tool for ID-2554 and expanded test bench capabilities

Project Lead, Bus Tracking Group Georgia Tech Parking and Transportation, August 2001-December 2002

Created Microchip 16F877 based GPS location, and rider tracker, shown on CNN Headline News

EDUCATION:

Georgia Institute of Technology: May 2003 with Honor. Bachelor of Science in Computer Science GPA: 3.3/4.0