Karen Shay West
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CORE FUNDAMENTALS

- Strong embedded C developer: including local area networks and communications, satellite TV, USB products, core home gateways, all-in-one printer/scanner/copier fax machines, multimedia infotainment systems, and US Navy missile defense systems, Driven and rigorous product test developer even in the most safety critical environments, Brought in new gaming business by writing C code for a set top box for demonstration to visiting vendors

- Effectively ran department meetings in a test leadership role resulting in passing US Navy Government Inspections of Code and Documentation

- Have a passion and seemingly limitless energy for learning new technologies and humanities

- Ready to apply professionally all new programming languages and business related humanities learned in online course work in addition prior expertise (see details-Linked In project section)

SOFTWARE LANGUAGES

- C, Assembly, Python, Android with Java and XML, R, MATLAB, Ruby on Rails, C++, SQL

TECHNICAL SKILLS AND HUMANTIES

- **Software, Embedded Development**: GNU, Emacs, PSOS, VxWorks, Proprietary RTOSs, Microsoft Visual Studio, C-shell Linux command interpreter using I/O redirection and forked and execed processes, Web Server in C

- **Code Management and Code Document Design**: Git, Github, ClearCase, CVS, Source Safe, Gliffy Diagrams

- **Hardware and software debug**: SoC registers specifications, Keil for Windows for ARM, Logic Analyzers, Oscilloscopes, Sniffers, Debuggers, Emulators, Jade hardware design

- **General**:   UNIX/Linux, Windows, Microsoft Office Suite or Linux Open Office Suite,DOORS

- **Technical Skills From Courses and Working**: Eclipse, Android Studio, Blue J, PWM, ADC, DAC, UARTs, LCD controller, UARTs, MathWorks MATLAB, Vmware Player, Oracle Virtual Box, and KVM's QEMU, all running Linux, Enthought's Canopy, Mentor Graphics Tools and Spice to design CPUs, I2C, SPI, Modbus, Rstudio, SQL, Software Security (buffer overflows, breaking web sites, tools to detect issues), Hardware Security (design vulnerabilities, Intellectual Property (IP), physical attacks, modular exponentiation, side channel attacks, hardware trojans, physical unclonable functions (PUF))

- **Humanities:** Justice-Ethical Reasoning, Micro-and Macroeconomics, International Human

Rights, EU Business Law, US Constitution, Growing Entrepreneurs in Challenging Economies, Technical Entrepreneur, International Criminal Law, Wiretapping and Surveillance

EXPERIENCE

- **RECENT YEARS:** Online education, short term, part time work – details in education section

- **DRAPER LABS, Cambridge, Massachusetts - 4/2007 to 8/2009 - Security Clearance Senior Technical Staff Member, Embedded Software, Test Coordination, Guidance, Navigation and Controls**
  - **Test Coordinator:** Spearheaded simulation and functional testing operations in the open and closed loop control systems simulators for the US Navy.

- **MOTOROLA, Lexington, Massachusetts - 1/2005 to 4/2007 - Applications Integration Embedded Software Support Engineer, Lexington, Massachusetts**
  - Authored multiple sample applications in C to debug interface between set-top-box firmware and vendor applications. Guaranteed that 100% of set-top-boxes could download and debug firmware and applications.

- **OASIS SEMICONDUCTOR, Waltham, Massachusetts □ 5/2002 to 12/2004--Embedded Firmware and Quality Assurance (QA) Software Engineer**
  - Designed and supported C code for printer and scanner software/firmware in addition to testing software/hardware for all-in-one printer, scanner, copier and fax machines, was the 25th employee at Oasis Semiconductor and learned how to work as an embedded software engineer in a start up environment and watch the company grow.

- **MOTOROLA, Mansfield, Massachusetts □ 8/2000 to 5/2002--Embedded Senior Software Engineer**
  - Wrote USB, Ethernet and HomeRF Wireless drivers written in C for BSD UNIX operating system by Broadcom for their chipset they had designed that we were using in our core gateway, to work on our Vx Works embedded operating system, traveled to Broadcom in California to work individually with some engineers to achieve this, and also assisted another engineer with the C code for their bridging software.
- **EARLY CAREER:** American Megatrends Inc (AMI), Digital Equipment Corporation (DEC, promoted to Senior Software Engineer and received Recognition and Performance Cash award for work done)

EDUCATION (financed myself through short term jobs and loans and some parental help)
- **Various Schools While Working Short Term and Part time (Recently):** 19 technical courses/projects, 10 humanities, 29 total), short term software contractor at AES (Associated Environmental Systems), part time at Best Buy, and Kohl's
- **Georgia Institute of Technology, Atlanta, Georgia, Master of Science:** Electrical/Computer Engineering & Computer Science: courses and projects in computer architecture, computer science, networking.   Worked short term to finance at GTRI, GT, Quantum, TI, Scientific-Atlanta
- **Carnegie Mellon University, Pittsburgh, Pennsylvania, Graduate Course Work:** Electrical Engineering & Computer Science – networks, operating systems, distributed systems, software for real-time. Worked short term to finance at CMU, Pittsburgh Supercomputer Center, CDI/Westinghouse
- **Boston University, Boston, Massachusetts, Bachelor of Science:** Electrical Engineering, Worked short term at IBM to finance and gain related experience (co-op).