ROBERT WARNER WALSH, JR.

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Accomplished engineer with extensive training and experience in a wide variety of software engineering areas including devops, full stack web development, and embedded firmware. Demonstrated experience and knowledge of cloud technologies, CI/CD pipelines, and systems automation and monitoring.

TECHNICAL BACKGROUND

CI/CD: Git (GitHub Enterprise), Jenkins, Splunk, ChatOps
DevOps: Test Driven Development with Chef. Expert knowledge of Amazon Web Services
Frameworks: Node.js, Django, Rails, React
Languages: Bash, Ruby, Python, JavaScript, C, C++
Operating Systems: Deep knowledge and experience with Android and Linux
Networking and Web Protocols: Extensive experience with HTTP, CSS, HTML, TCP/IP

Certifications: AWS Certified SysOps Administrator – Associate. Validation HBPVPHGKHNF4113C
Patent: US9146668B2 – Graphical element placement on a display surface

WORK EXPERIENCE

February, 2021 – present: **Software Engineer Lead, ServiceNow** Worked with the Creative Workflows team to plan and direct various improvements and addition features for the Table Builder and Management Console plugins of the Application Engine Studio (AES) developer environment for the ServiceNow platform. AES is written in Seismic which is a ServiceNow implementation of the React Node.js framework.

February, 2020 – February, 2021: **Systems Engineer, ServiceNow** Kept the operational platform used to manage ServiceNow running and accurate by removing duplication, fixing erroneous data, adding automation, and generally assisting solving issues. Worked with teams all across the company to gather requirements for improving the site.

September 2014 – February, 2020: **Systems Architect, Hewlett-Packard** Transformed our HP Instant Ink operations team into a devops team. Used best practices from test driven development and new tools and techniques for infrastructure control including Chef, chefspec, and test-kitchen to create a scalable, testable continuous deployment framework. Once this transformation was complete, moved the team to a "No Ops" model where infrastructure work was folded in to normal development work. Trained development teams to complete infrastructure work. Used state of the art systems for monitoring and alerting including Splunk, Chat-Ops, VictorOps, AWS CloudWatch, and custom monitoring systems. Continued to monitor our systems and look for weaknesses in our high availability, scalability, and disaster recovery plans. All applications ran on AWS. Additionally, worked closely with corporate security to ensure that our systems implemented best practices to reduce our threat surface. Finally, worked with our privacy legal teams to ensure that we complied with the continually changing landscape of world-wide governmental privacy laws.

March, 2012 – September 2014: **Technical Lead, Hewlett-Packard** Using Ruby on Rails, Mysql and nginx, HP Instant Ink is a world-wide ecommerce website where customers can sign-up, manage their accounts and have ink cartridges delivered directly to them. Involved in all aspects of the user-facing front end, back end systems, database schema, and admin user interface. As Instant Ink expanded into more countries, worked with the back end business processing systems to deliver ink world-wide.

September, 2011 – March, 2012: **Technical Lead, Hewlett-Packard.** Researched ideas, algorithms and hardware accelerations for a New User Interface (NUI) consumer product which eventually became HP Sprout. Experimented with touch systems, infrared depth range sensors, hardware algorithm accelerators and distributed system to create a system that recognizes hands, objects and actions and responds in an intelligent manner. The development platform used two TI OMAP4 SOCs, one running Embedded Linux and one running Android, coupled with a Primesense depth sensor and a small projector.

January, 2010 – September, 2011: **Technical Lead, Snapfish.** Responsible for the technical architecture and planning of the Discover Vertical at Snapfish. Helped program managers plan and estimate projects. Worked with other leads at Snapfish to define and improve web architectures. Mentored team engineers in JavaScript and Java coding practices and code reviews.

February, 2009 – January, 2010: **Flash Software Engineer, Snapfish**. Design, developed and maintained various parts of the photo book and photo calendar builders used by Snapfish customers to creative place and edit their photos in a variety of calendar and books. All work was done in Adobe Flex.

November, 2007 – February, 2009: **Systems Architect,** Light Production Solutions, **Hewlett-Packard**. Involved from the start in the creation of a new R&D group exploring complete solutions for the low-end commercial printing market. Provided information and insight to marketing and management aiding in the decisions for staffing, partnering and planning. As we added more staff, I transitioned to leading the firmware team's efforts to adapt the HP Edgeline technology to the Light Production market. The printer architecture consisted of a distributed system communicating over PCIe. Components ran Windows or Linux and code was deleveloped in C++, C, and C#.

June, 2004 – November, 2007: **UI Lead,** Photo Specialty Printing, **Hewlett-Packard**. Responsible for the design and delivery of the user interface for both Appliance photo printers and Photo B-size photo printer. Worked with Human Factors, Marketing and Program Management to develop a compelling consumer-oriented user interface. All development was in the C language.

March, 2003 – June, 2004: **I/O Lead**, Inkjet Commercial Division, **Hewlett-Packard,** Barcelona, Spain. Responsible for delivering the I/O subsystem for the next generation DesignJet printer, including fast Ethernet, gigabit Ethernet, Firewire and USB 2.0 connects. Managed the DesignJet I/O engineers in both Barcelona and Bangalore. Participated in the design and oversight of the IPG-wide SAND assets program which aims to provide a well defined API allowing applications to be shared among IPG divisions. Coordinated with these divisions to ensure that all components were delivered on-time to Barcelona. All development was in the C language.

July, 1998 – March, 2003: **Software Engineer,** Inkjet Commercial Division, **Hewlett-Packard,** Barcelona, Spain. Responsible for all aspects of HP DesignJet printer networking including both

printer-side and host-side Expert consultant for all host-side I/O connectivity Implemented several PDLs used for auxiliary services such as diagnostics, firmware upgrade, and testing. Designed the Linux-based operation system which formed the basis for the next generation DesignJet printer. All development was in the C language.

September 1996 – July, 1998: **Technical Leader**, Small Business Computing Operation, **Hewlett-Packard**, Grenoble, France. Lead the design, development, and maintenance of the HP Network Center bundled on the HP Brio PC for the small business market. The HP Network Center simplified many of the peer-to-peer networking tasks such as sharing a folder and printer. The emphasis was on a simple, intuitive user interface.

January 1995 – September 1996: **Technical Leader**, Telecommunications Networks Division, **Hewlett-Packard**, Grenoble, France. Supervised release of the Service Control Point (SCP), an Intelligent Network element used by a telephone switch to perform complex call control using the CCITT and ANSI TCAP standards over an SS7 network.

April 1994 – January 1995: **Technical Leader**, Telecommunications Networks Division, **Hewlett-Packard**, Grenoble, France. Designed, developed and maintained a database replication system using a standard SQL database. This position required extensive knowledge of the behavior of TCP/IP data flow across X.25, 802.3, and 802.3 over fiber optic line configurations.

May, 1993 – April, 1994: **Project Leader**, **France Télécom**, Sophia Antipolis, France. Managed a team of 9 engineers developing SPHERIS, the multi-platform electronic mail user interface for France Télécom. The system used several communication methods including X.25, NOVELL, LAN Manager, and NFS.

August, 1992 – May, 1993: **Project Leader**, **France Télécom**, Sophia Antipolis, France. Lead a special project for La Poste, the French post office, using the E3X MTA to route electronic mail messages toward a postal printing system which printed the message and then mailed it using the physical delivery system.

November, 1991 – August, 1992: **Software Engineer, France Télécom**, Sophia Antipolis, France. Developed and maintained an Application Program Interface (API) for an X.400 standards-based Message Transfer Agent (MTA) based on the X/Open CAE Specifications (XAPIA and XOM).

April, 1990 – November, 1991: **Research Engineer**, **Hewlett-Packard**, Bristol, England. Research engineer at HP Labs, Bristol. Researched advanced techniques in network management using both hardware and software solutions. Implemented a CMIS MIB for managing Unix workstations. Implemented an SNMP protocol stack and several SNMP MIBs both in C and in SmallTalk 80. Designed and implemented network management instruments for 802.3 and 802.5 networks.

July 1989 - April 1990: **Software Engineer**, **Hewlett-Packard**, Cupertino, California. Engineer in the Network Management Lab in the Information Networks Division. Designed and maintained new functions for the OpenView Microsoft WINDOWS network management platform. Involved in the design of the OpenView UNIX network management developers kit which uses both CMIS and SNMP standard network management protocols. Assisted the marketing department in a variety of customer-oriented documents.

Fall 1987 - Spring 1989: **Teaching Assistant**, University of Wisconsin-Madison Computer Science Department. Instructor for an undergraduate level Pascal/FORTRAN programming course. Prepared lectures, exams, assignments; led tutorials, problem sessions. Responsible for all aspects of instruction and grading.

Fall 1985 - Summer 1987: **Technical Staff**, Digitran Corporation, Lafayette, Louisiana. Involved in all aspects of the software life cycle for several large- and small-scale oil industry-related simulators.

EDUCATION

Masters of Science in Computer Science, University of Wisconsin, Madison, Wisconsin, U.S.A.
Bachelors of Science in Computer Science, University of Southwestern Louisiana, Lafayette, Louisiana, U.S.A.
Languages: Native English speaker, fluent French, fluent Spanish.