Senior Software Engineer, Big Data Engineer in Python Senior Software Engineer, Big Data Engineer in Python Senior Software Engineer, Big Data Engineer in Python - NBC Universal ? 10+ years of software engineering experience with a focus on Designing, Architecting, and Developing applications for various industries ? Expertise in Object Oriented and Functional Programming development, writing applications in multiple modern development platforms (e.g. Python, C#, Java, JavaScript, Elixir, C++) ? Strong database knowledge including Hive, Snowflake, MySQL, SQLite, SQL Server, Oracle, and MS Access ? Experienced in full Software Development Life Cycle process (SDLC), from Gap Analysis, to Gathering Requirements, Design, Testing, Implementation, and Maintenance ? Proficient in Gap Analysis, Requirements Gathering, Solution Design, Agile Software Development, Rapid Application Development, Iterative Methods, and UAT testing ? Adept in collaborating and communicating with all project stakeholders, from senior executives, to business stakeholders, IT staff, vendors, and consultants to facilitate timely and accurate project deliveries ? Experienced leading and managing culturally diverse, and globally distributed project teams (e.g. India, Brazil, Taiwan, Australia) across multiple disciplines Work Experience Senior Software Engineer, Big Data Engineer in Python NBC Universal - Hollywood, CA September 2018 to Present Worked as the principal investigator and researcher, designer, architect, and lead software developer for the Film Automatic Title Matching Project. The ambitious goal was to automatically match millions of random movie titles from the internet, to known movie titles. My title matching algorithm results were fed into another Data Science project for predicting Film Box Office performance, based on social media activity on the internet. ? I designed and developed an innovative solution, with an intelligent scoring and grading system, that can process over 1 million title matches per hour, per computer. It can be scalable across multiple computers. ? It uses multiple algorithms to parse, tokenize, index, and search for movie titles. Regular Expressions were also heavily used to match for string patterns, as well as data-wrangling techniques for data manipulation. ? My proprietary algorithm uses a hierarchical, multi-level, heuristic weighted scoring system, to score and grade different aspects of a movie title, in order to make an intelligent decision and select the correct title. It also used additional meta data to help improve selection accuracy. This

allowed for intelligent decisions to be made with mathematical precision. ? I built a high-performance, memory-driven, object-indexed, key/value pair database, with access speed that outperformed regular SQL databases. For comparison, an SQL approach did 400k lookups per minute. My technology performed in excess of 20 million lookups per minute; an improvement of over 50 times the best SQL system. ? The technology and algorithms that I designed, can also be used for any other situation, where an intelligent decision needs to be made from a large set of data. ? The program code is written in Python, is object-oriented, functionally-driven, and thoroughly unit-tested with 100% complete code coverage. Other technologies used include Snowflake and Hive for large data storage and retrieval. Independent Consultant Los Angeles, CA October 2017 to August 2018 Software Development and Technical Consultant ? Worked as a Software Development and Technical Consultant, providing programming, technical, application, data analysis, web development, systems administration, and networking support to clients. ? Designed and developed programs and tools in Python to help automate and solve business problems. Senior Software Development Engineer Honda Motors - Torrance, CA August 2014 to October 2017 Designed and developed Python programs to generate massive quantities of vehicle data XML files, in the millions, in order to do performance testing and stress testing. Wrote program to generate the XML structure, where each XML file represented a unique vehicle contacting the server, for millions of simulated vehicles ? Developed programs in Linux Bash Shell to automate the performance and load testing of the system ? Used Python, Bash Shell, and Windows Batch to develop the programs. The programs were also unit tested and pathway tested to ensure accuracy and correctness. ? Developed program to analyze vehicle sensor data for the Business Intelligence platform Business Objects. Wrote SQL programs for the ETL of Big Data. The goal was to find trends and problematic issues in customer vehicle history, for the Honda Service Engineering team to proactively identify and monitor, in order to provide a better product for customers. ? Led the QA testing effort and developed programs in Python and Bash Shell, to automate the repetitive tasks. ? Designed and developed program to use SQL to reverse-engineer an old database system, where the original consultants were no longer available. The documentation was poor and limited, so I had to pick the

database apart, to understand the system's inner workings. Solved this problem, and created a database dictionary, database table diagrams, and documentation to help understand the original designs. ? Developed Linux Bash Shell program to automate the nightly movement of large vehicle program files around, between Honda Japan and Honda USA, to verify data correctness, and then to ETL load the data into a database, where it was linked with the Jira Ticketing System.

Independent Consultant Los Angeles, CA November 2013 to August 2014 Software Development and Technical Consultant ? Worked as a Software Development and Technical Consultant, providing programming, technical, application, data analysis, web development, systems administration, and networking support to clients. Senior Software Development Engineer 99 Cent Only Stores - Los Angeles, CA May 2012 to October 2013 Designed and developed software solutions for complex business processes. Specializing in Supply Chain execution and planning, including merchandise allocation, store replenishment, store ordering management, and inventory management ? For one project, monitored the growing inventory of merchandise in the store back rooms. The report creation was tedious and time consuming, so I automated the process by developing a program in Python to summarize and visually report on the trending inventory. The weekly report took over 7 hours to create manually, but the new automated solution created the weekly reports in 30 seconds. This weekly report helped to turn raw business data into executable business intelligence; that enabled the store managers and regional directors the ability to see trends and spot problems with their stores. ? Developed detailed Functional Design Specifications documents, that include process flow charts, software UI wireframes, screen layouts, report formats, and the supporting business logic required to implement the business requirements. Facilitated user acceptance testing, and supported user training, and created product documentation ? Accomplished redesigning and overhauling the company's archaic merchandise ordering system. The existing process was old, confusing, complex, and error prone; so, I created and designed a new user-friendly web interface that would allow store managers to order merchandise, and view reports. The new web design would reduce the labor time required by store managers, to order, review, and submit store merchandise orders. For this project, gathered the requirements, wrote the

Functional Specifications documents, which included UI wireframes, screen layouts, report formats, and business logic. I also created a prototype application using the iRise Visualization program, which brought the designs to life, and allowed our users and managers the ability to visualize and interact with the proposed application and our designs. ? Designed and developed programs to use SQL to perform ETL on the retail sales data, to identify trends, patterns, and issues for further analysis, from the MicroStrategy Business Intelligence system. Technical Lead and Senior Developer Altametrics, Inc - Los Angeles, CA October 2009 to May 2012 Performed as Technical Lead and managed a team of 5-10 engineers to successfully implement and deploy various solutions for clients including: McDonald's USA, McDonald's Australia, Wendy's, CPK, Chipotle, Marie Calendars, and Baja Fresh. Software was used by thousands of retail restaurants ? Provided customer consulting services, technical project management, user training, systems requirements gathering; and generated requirements specifications, technical documentations, and gap analysis ? Successfully managed a team of engineers to analyze, build, and deploy a pilot system for McDonald's Australia, generating over $500,000 in revenue. It incorporated business analysis, requirements gathering, gap analysis, software development, and technical product documentation. The project was heralded as a success, winning customer approval, meeting objectives and milestones in the project plan, delivering on time, and on budget ? Developed software tools to help analyze raw business data, and to turn it into actionable business intelligence. ? Wrote program that turned raw business marketing leads, into clean data, and was ETL loaded into a database. ? Developed tool that allowed for the easier input of raw business data from customers, to be ingested into the main business system. ? Developed tool in Visual Basic that allowed for the generation and verification of customer authentication codes. Technical Lead / Developer Zebra Technologies Corp - Los Angeles, CA January 2006 to May 2009 Worked as the Technical Lead to successfully implement Real-Time Locating Systems (RLTS) at west coast marine terminals, resulting in better inventory management and cost savings achieved though automations ? Major clients included: Husky Terminals, Yusen Terminals, SSA Terminals, ITS Terminals, Maersk APM Terminals, and LBCT Terminals ? Lead a team of 5 to deploy the RTLS system in the field ? Performed and

managed application installation and configuration, troubleshooting, and deployment ? Perfected the RTLS application by helping to solve key system technical issues encountered during operations. The new improved solution increased production throughput by 20% ? Conducted integrated system software and hardware testing, field deployment and validation testing, data analysis, technical support, customized software development, software installation, end-user training, technical demos to executives, and wrote technical documentations ? Provided feedback to Product Management for ongoing product development and engineering enhancements ? Developed software tools to help analyze business operations, and to turn it into visual and actionable business intelligence. ? Developed tool in Visual Basic that allowed for the analysis of massive raw equipment sensor data; to turn it into a visual representation of the system's business operations. This tool was key to solving a serious defect in the beta system, which was hindering the technology. By using this tool to debug the system, I was able to help identify and isolate the problem, thereby helping increasing the container transition accuracy from 75% to 95%. This was the key to allowing the product to be further deployed worldwide. Technical Project Manager / Implementation Analyst / Developer Integrated Decision Systems, Inc - Los Angeles, CA September 2004 to June 2005 Worked as the Project Manager on new software and systems installation in the Financial and Securities industries ? Major clients included: Fidelity Investments, American Express, Bank of America, Wells Fargo, JP Morgan ? Led a team of 5 to deploy and integrate new software systems in the field ? Provided both technical and consulting expertise to corporate customers on proven IT solutions to streamline business performance, expand marketing, and increase sales ? Performed risk management and made key project decisions to design effective solutions to address the unique IT needs of each corporate customer ? Supplemental activities include business systems analytics, custom solutions development, and technical architecture to help design and recommend systems and configurations. ? I developed software tools to assist in the easier onboarding of new customers. This was a pain-point that new customers had with the product, and the tools allowed for pre-installation questions and checklists to be automated, and to be ingested into the system upon installation. This tool was written in Perl. ? Another software tool I developed was to extract database data and

statistics, using SQL and ETL, to aid in data analysis and troubleshooting. This tool was written in Unix Bash Shell. Senior Technical Support Engineer / Software Developer Moxa Technologies Inc - Brea, CA November 2003 to September 2004 Worked as the Senior Technical Support Engineer to provided expert pre-sales and post-sales technical consulting support to our customers ? Focused on networking hardware: serial device networking, high speed fiber-optic networking, and embedded serial networking for OEM customers. Specialized in building networking equipment for industrial automation, commercial, and military applications ? Worked directly with software and hardware engineers to design solutions at the software code and hardware integration level ? Required to have an in-depth knowledge of computer software and hardware systems, to understand the intricacies of software code, and to be an expert at TCP/IP networking, as well as serial and fiber-optic communications ? Developed solutions to improve business efficiency through software automation ? Focused on the company's core business operations, directly helping to enhance the company's financial bottom line. Senior Systems Engineer / Software Developer Focused on storage systems - Corona, CA September 2000 to November 2003 Worked as the Systems Engineer to focus on successfully bringing an integration project to completion on-time and under budget ? Focused on storage systems such as Optical storage, Tape storage, hard drive storage (SAN, NAS, RAID), and application software to power back end systems ? Responsibilities involved working through the full life cycle of an IT consulting project, ranging from the initial pre-sales consulting to documentation and post-sales technical support ? Work involved hands-on technical problem solving with internet applications, backup and HSM storage software, and email retention software running on various UNIX and Windows based systems ? Wrote technical documentation, and provided on-site support in systems configuration, network setup, and diagnosis of technical problems ? Programmed the company's intranet portal CRM system for Sales and Technical Support ticketing, using ASP and SQL Server ? Modernized the firm's computing infrastructure to run Windows 2000 and Linux servers. Senior Systems Administrator / Software Developer Pasadena City College - Pasadena, CA September 1998 to August 2000 Worked as the Lead Systems Administrator to design and implement a distributed LAN of over 100 workstations running

Windows and Linux clients, to support over 500 students and staff using Linux and Windows NT 4.0 Servers ? Led a team of 5 administrators to develop and enhance the network from the ground up ? Programmed various Perl, shell, and batch scripts to enhance and automate this network. Installed and maintained web servers, name servers, email servers, and logon servers ? Developed an internal Intranet portal running on ASP and SQL Server to handle student/teacher relations and announcements Education B.S. in Computer Science in Computer Science University of California Riverside - Riverside, CA Skills ASP (5 years), Business Intelligence (10+ years), business requirements. (4 years), data analysis (5 years), database (7 years), gap analysis (2 years), Jira (3 years), Linux (8 years), MARKETING ANALYSIS (5 years), MS SQL SERVER (5 years), Perl. (2 years), Python (6 years), Software Development (10+ years), SQL (10+ years), SQL Server (5 years), STRUCTURED SOFTWARE (10+ years), testing (8 years), Unix (3 years), Visual Basic (5 years), XML (3 years)

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