**P R A B H U R A N G A R A J A N** Bangalore - 560043

**Tech blog -** http://www.code-bits.net +91 9003286350

**My Apps -** https://github.com/prabhu1010[prabhuabc123@outlook.com](mailto:prabhu.rangarajan@cognizant.com)

A results-driven software architect with 16+ years of solid experience in software design and development primarily on the Linux platform. Sharp analytical skills, highly self-motivated (constantly works on side projects, code contests, Hackathons), creative and quick with ideas, mature communicator with strong mentoring skills, especially in guiding junior developers to take their abilities to the next level.

**Key Skills**

|  |  |
| --- | --- |
| **Proficient** | **Competent** |
| Python, C, C++, Perl, Linux/Unix Scripting, PHP, SQL,  Data Structures, Design Patterns, Machine Learning, HTML, CSS, JavaScript, LAMP Stack, Git, Perforce | Java, jQuery, Netmon, Wireshark, Cucumber  Oracle, PostgreSQL, MySQL, ClearCase, SVN |

**Education/Certifications**

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| --- | --- | --- | --- |
| **Name** | **Institution** | **Location** | **Year** |
| M.S Computer Science | Clemson University | Clemson, South Carolina, US | 2006 |
| Dipl. In Adv. Computing | C-DAC | Pune, India | 1999 |
| B.E (Mechanical) | PSG College of Tech. | Coimbatore, India | 1998 |

**WORK HISTORY**

*Employer:* ***Cognizant Technology Solutions,*** *Bangalore Since Aug 2016*

*Client:* ***Capital One Bank****, Plano, Texas*

***SFG Automation and Cloud Migration*** *(since May ‘18)*

Electronic Data Exchange(EDE) is Capital One's new Cloud based file sharing platform. It enables multiple partners of Capital One to share files with the bank and with each other. For several years, Capital One had been using IBM's Sterling File Gateway(SFG) as its file sharing platform. The objective of the project was to extract metadata(participating endpoints, transfer type, hops involved, transfer route owners) spanning several months from SFG file transfer logs and use this metadata to set up the file routing rules on the EDE Cloud platform. Environment: ***Python, Bash scripting, Bash Shell Scripting, HTML, CSS, Git***

* Designed a number of Python modules and scripts that would efficiently process over 12 GB of log data and speedily extract relevant metadata across multiple log servers.
* Designed and developed actively transferred file patterns, and determine the inactive filename patterns to be decommissioned.
* Designed scripts to decommission the inactive transfer routes as a batch process, with several hundred routes getting decommed per batch execution.
* Developed automated scripts to retrieve specific metadata and resolve queries sent by different LOBs.

*Client:* ***Artificial Intelligence and Analytics Group, Cognizant (****Mar - Apr ’18)*

* Designed and contributed to the development of *Project Viewer*, which is a project health monitoring dashboard used by Cognizant. Projects Viewer is a graphics based charting and reporting tool that will empower managers across 250+ projects in the Analytics domain to update project metrics and monitor health.
* Developed Cognizant’s *Smart Delivery Framework* web portal, a vast online search catalogue of case studies, white papers and knowledge documents on Machine Learning apart from data scientist profiles.
* Designed the architecture and contributed to the implementation of Cognizant’s *Caggle* web portal, patterned on the competition platform *Kaggle.com*. The objective is to enable Cognizant clients to post their data for analysis and prediction modelling from Cognizant’s data scientists.

Environment: ***Linux, Apache, PHP, CSS, JavaScript, JS Charts library***

*Client:* ***JP Morgan Chase****, Dallas, Texas*

***Security Logging Platform*** *(Sep ’17 – Feb’ 18)*

*Security Logging Platform* is a high-availability, fault tolerant and resilient data/storage pipeline that supports the real-time ingestion, aggregation, filtering, storage and analysis of log data from a variety of sources(files, network, etc)

* As *Release team Lead*, co-ordinated with onsite team for tracking, implementation and delivery of deployment artifacts.
* Wrote automation scripts to validate the configuration and deployment of build artifacts across the HDFS pipeline. Led code reviews to ensure scripts were adherent to coding and performance standards.
* Interviewed prospective candidates and made hiring decisions to resolve developer staffing needs of projects across the account.

Environment: ***Python, Bash Scripting***

*Client:* ***Ford Technology Solutions,*** *Dearborn, Michigan*

***FEDE Authoring*** *(Feb ’17 – Jul ’17)*

* Fixed bugs, made code changes and rebuilt the VSEM Manager GUI automation tool to help users make configuration changes to their TeamCenter environment.
* Designed and implemented an automation test suite in Selenium for testing the Interface Matrix features in FEDE Authoring project.
* Collated business requirements on daily basis from client and tracked the progress of tasks. Broke down and categorized deliverables for tracking during the project's migration to Agile mode of delivery.
* Interviewed prospective candidates and made hiring decisions to resolve developer staffing needs of projects across the account.

Environment: ***Java, C++, Visual Basic, Selenium, TeamCenter***

*Client:* ***E\*TRADE FINANCIAL****, Menlo Park, California*

***Retail Brokerage Services*** *(Aug ’16 – Jan ’17)*

* Served as Product Engineering Manager for the Retail Brokerage Services offshore team of 34 developers, handling technical responsibilities in addition to delivery.
* Made enhancements to the Straggler report generation script to include processing of SPY Exchange-Traded Funds. Wrote automated test cases using Cucumber as part of the BDD process. The tests validated processing of Equity Orders within the 10B5-1 plan. Investigated and fixed code defects to meet roll deadlines.
* Established a fair, transparent and data-driven policy for visa nominations. Initiated and drove a monthly **Developer Seminar Series** that highlighted team members’ involvement in technology areas within and outside their projects. Interviewed and made hiring decisions on over 40 candidates for technical and managerial positions across the business unit.
* ***Hackathon innovation*** - Developed a resume ranking tool called ***HireShark*** *("every good resume evaluated****")***. The tool rates applicant profiles based on an algorithm that assigns points based on the applicant's education, quality of institutions attended, quality of companies previously worked at, CTC, onsite experience, patents held, open-source contributions. ***This empowers hiring managers to objectively shortlist only the very best candidates even from an abnormally large applicant pool***. Details: [www.code-bits.net/hireshark.htm](file:///D:\CAREER\RESUMES\www.code-bits.net\hireshark.htm)

Environment: ***C++, Java, Perl, Python, SVN, Cucumber***

*Employer:* ***HCL Technologies****,**Chennai Oct 2013 – Aug 2016*

*Client:* ***Xerox Corporation****, Hertfordshire, UK*

***Print Engine for Brilliance WorkCenter***

* Investigated and fixed pre-launch bugs in paper feed and toner modules of Xerox’s Brilliance WorkCenter
* Wrote a Log Parser tool that parsed error logs(often containing 40-100K lines) and isolated failure events that greatly reduced debugging time.
* Go-to person for correcting inefficiencies in the delivery process : dived into recurring issues, identified solutions and executed them (e.g, multi-step Build and Release process activities were causing human errors : wrote scripts to automate the process bringing the Deployment window from 4 hours to 15 minutes, which not only eliminated the cause for defects but also freed up developer availability for other tasks).
* Served on hiring teams, mentored freshers/junior devs and had them contributing with confidence within weeks of joining. Motivated juniors to better their abilities by having them participate in challenging online code contests outside of work hours.
* Constantly met challenging delivery schedules by automating processes, developed strong rapport with delivery leads and junior members. Environment: ***CentOS, Embedded C++, Perl, Python, Git, ClearQuest***

*Employer:* ***HCL America,*** *Sunnyvale, California* *Dec 2008 – Oct 2013*

*Client:* ***Microsoft,*** *Mountain View, California*

***MSN TV Service Support and Maintenance***

**MSN TV** service owned by Microsoft was a provider of internet-based services, web browsing, multi-user email accounts and TV content through a set-top box to its subscribers.

* Made changes to the MSN TV’s mail back-end and UI to model Hotmail's Storage Folder feature.
* Fixed bugs in extraction of content(weather, news feeds, stock prices) from partner sites and corrected presentation issues on the UI.
* Investigated network connectivity failures and passed on root cause information to Ops teams.
* Since MSN TV Mail was not designed to block Spam, compiled Postfix 2.6 source, installed binaries, set up config files to work with Symantec's Brightmail spam-filter APIs which led to a spam blocking rate of around 97% on customer mail accounts.
* *Product shutdown activities:*Coded features and added options to the bulk-migration tool used by Microsoft to move mail content of over 150,000 MSN TV subscribers' to Hotmail mail servers before the product’s shutdown(2013). Responsible for pre-shutdown related announcements on the home page UI.
* Used Netmon/Wireshark to investigate and fix mail migration failures due to mail content parsing issues.

Environment: ***C, Solaris, Oracle 9i, Perforce, Postfix 2.6, HTML, JavaScript, Awk***

*Employer:* ***Techgene Solutions, Texas*** *(formerly Vensiti Inc)**Apr 2007 – Dec 2008*

*Client:* ***Microsoft,*** *Mountain View, California*

***Maintenance of Microsoft’s CSDesktop Customer Management System***

* Fixed functionality bugs in the CSDesktop tool used by CS agents that quickened resolution of customer issues and reduced customer interaction time.
* Enhanced security features in payment processing to comply with PCI audit requirements.
* Ran KT sessions with Microsoft's CS teams in Panama/Canada on support issues and new functionality.

Environment: ***Visual J#, HTML, JavaScript, Oracle 9i***

*Client:* ***Hewlett Packard***

*Location:* ***Frankfort,*** *Kentucky*

***Kentucky Medicaid Management Implementation System(KYMMIS)***

* Added new features to the KYMMIS back-end code(migrated to C from COBOL), corrected errors in the claims processing logic leading to accurate claim payments and a vast reduction in customer tickets.

Environment: ***C, C++, Unix (Solaris), Oracle 10g, Perl, Pro\*C, XML, GDB***

*Client:* ***Pizza Hut***

*Location:* ***Dallas,*** *Texas*

**Migration of Point-of-Sale application from SCO Unix to SUSE Linux**

* Migrated Pizza Hut's Point-of-Sale application code(running in 6,000 US and Canadian outlets) from SCO-UNIX to SUSE Linux.
* Fixed a number of memory leaks to ensure stability of the product on Linux

Environment: ***C++, Oracle, SUSE Linux, SCO Unix, gdb***

*Employer:* ***Clemson University****, South Carolina**Oct 2004 – Dec 2006*

*Client:* ***Clemson University Dept. of Computing***

* Provided software installation and hardware technical support to over 15,000 students and staff.
* Consistently set monthly highs for maximum number of support tickets closed and was promoted to Traning Lead. Wrote *how-to* documents that enabled new recruits to contribute rapidly.
* Took charge of a variety of responsibilities: served as IT Rep on Laptop Orientation Day addressing questions from 1200 students/parents at the University auditorium, worked as switchboard operator on the University's phone helpline in the evening shift.
* ***Teaching Assistantship:*** Taught Visual Basic Programming to high school students at Summer Science Camp.

*Employer:* ***Hewlett Packard*** *Jul 2003 – Jul 2004*

*Locations:* ***Bangalore, Atlanta, Colorado Springs***

***Support and Maintenance of WESTAR and Work Flow Manager(WFM)***

* Part of a team of six that received training and moved 14 support projects from US to Bangalore.
* Fixed application performance issues in WESTAR, HP's internal solution tracking and reporting tool, used by more than 5000 users across different HP offices in North America.
* Provided phone and remote desktop support and problem resolution to users of HP’s Work Flow Manager(WFM) application. Environment: ***Perl, Unix Shell Scripting***

*Employer:* ***Zensar Technologies,*** *Pune Feb 2003 – Jul 2003*

*Client:* ***Bahrain Telecom,*** *Manama, Bahrain*

***Enhancement and Maintenance of CommerceLink Payment Gateway***

* Coded new features in C++ to provide complete authentication and processing of online transactions using VISA credit cards.
* Analyzed logs of transactions in case of transaction failures and provided swift resolutions.

Environment: ***C++, Perl, PostgreSQL, Unix (AIX)***

*Employer:* ***Capgemini,*** *Mumbai Feb 2000 – Feb 2003*

*Client:* ***HITACHI,*** *Yokohama, Japan*

* Started my career with a code migration project(HP-UX to Solaris), then worked on four fast-paced development projects in small teams, contributing in all aspects right from writing functional specs, design docs, test cases, test tool creation, development and delivery.
* Received ***Valuable Contribution Award*** in my 1st year of employment for simultaneously working on two projects that were running behind schedule, often working overnights and weekends to help deliver them in time.
* Often delivered cross-platform code that ran without issues on Windows/Unix AIX, Solaris, HPUX meeting stringent customer expectations on memory consumption and code quality.

***Regular Expression Library for Windows***

* Implemented on Windows a **Regex Library** that emulates the POSIX Regex functions. Developed a COM interface that interacted with the VBScript.DLL file to provide pattern searching and matching functionality.
* Received a 4.8/5 project rating from HITACHI for product quality as well as delivery – ***shipped one month ahead of schedule(team size: 3)***
* Environment: ***C++, COM, Unix(AIX)***

***FileLink – an automated test tool***

* Wrote code in C to develop the FileLink tool for HiRDB, which is Hitachi’s in-house RDBMS. The tool facilitates automation testing of over 1500 test cases to validate new releases of the HiRDB product.
* Created scripts to handle weekly backups of source code and documentation.

Environment: ***C, HiRDB, Visual Studio***

***CC-Manager tool for ClearCase***

* Wrote C code to develop the CC-Manager tool for ClearCase that keeps track of code check-ins.
* Ported the code to run on 3 Unix platforms (Solaris, HP Unix and AIX).
* Developed a cross platform automated Test Tool in Perl to execute test cycles.

Environment: ***C, ClearCase, Perl, Solaris***

***Development of SENIGEN Tool***

* Coded Hitachi’s SENIGEN screen transition tool in Visual C++.
* Utilized the MFC Class Library to generate a pictorial screen transition table within an Excel Worksheet.
* Wrote a reusable Macro library in VBA that was used as a code documenting tool.

Environment: ***Visual C++, MFC, VBA***

***Work Coordinator Library on Solaris***

* Migrated Work Coordinator Library’s C source code and Makefile build systems from HP-UX 11.0 to SUN OS 5.8. Built the Installation Program for SUN OS 5.8 using Install Shield.
* Wrote procedures in PL/SQL for writing new business processes to database.

Environment:***C, Solaris, HP-UX, Oracle 8i***

**ACADEMIC PROJECTS –** *MS Computer Science, Clemson University, South Carolina( 2004 – 2006)*

* Wrote a ***Disk Scheduler*** for the Linux kernel to service disk-requests with minimum seek-time using a branch-and-bound algorithm that maintains a sorted binary tree of disk requests.
* Implemented a ***device driver*** as a Linux kernel module for the Permedia 2V PCI graphics board manufactured by 3D Labs. The driver supports DMA and has a customized Interrupt Handler.
* Wrote a system call ***smunch*** for the Linux Kernel which kills zombie and sleeping processes.
* Wrote a multiuser chat room application in C supporting using the ***LiveMedia555*** open-source library.
* Wrote a ***Compiler*** in C for the language FORTH
* Developed using PHP and MySQL a web-based multi-user Data Backup system that supports Version control.
* Developed a ***Gene class prediction model*** with the WEKA Machine Learning tool for gene classes from a huge dataset of 7070 genes with 70 samples for each gene.

**OPEN SOURCE APPS** - [*http://www.code-bits.net*](http://www.code-bits.net/)

* Building a Tennis Tournament Simulator web-site in PHP that allows fans to conduct entire 128-player tournaments involving their favorite tennis players from the past 38 years. I designed the player ranking algorithm using the **Wilson score interval** statistical model applied to 38000 actual match results.
* Developed a command line version of the above Simulator - <http://www.code-bits.net/fantennis.htm>
* Developed two realistic games in C - ***Test Cricket*** and ***One Day Cricket*** inspired by the **Monte Carlo algorithm**. *One Day Cricket* was downloaded 4000+ times on *www.planet-source-code.com* within a week and was featured on the website’s **Most Downloaded Apps This Week**.

**REFERENCES** - *Contact details available on request*

* Andrew Levin – **Product Development Manager, Microsoft**, Mountain View, California.
* Sam Rafter - **Operations Engineering Lead, Microsoft**, Mountain View, California.