Nilkanth Patel

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Summary

- Total 8.5 years of experience with expertise in Core Java, C++, C. Involved in design and development of multithreaded system applications, network security products and Distributed In-memory caching product.
- Strong in product design, development, debugging, profiling and code optimization.
- Highly motivated and result oriented professional with strong technical, interpersonal and communication skills.
- **Key skill sets:** Core Java, C++, C, IPC, Multi-Threading, Network/Socket Programming, UNIX.

Education

- **Master of Technology (M.Tech) in Computer Engineering** with **9.10 CGPA** from National Institute Of Technology (NIT/REC), Surat, July-2008.
- Bachelor of Engineering (B.E) in Information Technology with 1st class (62.16%) from L. D. College Of Engineering, Ahmedabad; Gujarat University, May-2004.
- H.S.C (12th) with 86.67% from GSEB, Gandhinagar, March-2000.
- S.S.C (10th) with 88.43% from GSEB, Gandhinagar, March 1998.

Work Experience

Pivotal Inc (EMC-Vmware spinoff)   **Designation:** MTS-2   **Duration:** April 2010 - till date.
Skills: Core Java, Spring Framework, C++, C#.
Gemfire is an in-memory distributed data management platform (NoSQL key-value store) that provides real-time, consistent access to data-intensive applications. Being a developer with the Server and Native Client product team, I have worked on following,

Gemfire client-server Integrated security framework.
- Identified vulnerability in existing security framework and supported single point of security configuration for all client-server channels (Gemfire clients, Admin shell-gfsh, REST client, DS monitoring tool-pulse).
- Design and implementation of gemfire REST APIs security.
- Worked on enhancing existing gemfire client-server security framework.

Gemfire REST APIs.
- Designed and implemented REST APIs endpoints for gemfire that enables any programming language/device (that understands HTTP) to use gemfire capabilities without writing corresponding java classes for their data (JSON documents).

JSONFormatter - Module for JSON to/from PDX conversion.
- Worked on the design and implementation of JSON document parser to enable gemfire to store JSON type documents with querying and region operation's capabilities.

Portable Data Exchange (PDX) Serialization.
- Designed and Implemented core PDX infrastructures (PDX serialization format) for native clients with class versioning support.

Partitioned region Single hop optimization for Native cache clients.
- Designed and Implemented Single-hop architecture for Native cache clients that improved performance for operations like create/put, get, destroy, putAll, getAll, and on-region function execution by ~1.5 to 2 times for partitioned region.

Gemfire Data Consistency.
- Changed implementation of client cache region APIs to handle versioning of events to maintain data consistency in DS.

Miscellaneous NC tasks: Parametrized querying support, C++ style SSL wrapper, Statistics, customer tickets and bug fixing, Unit test coverage for C# APIs.

Fortify Infrastructure Services (India) Pvt. Ltd.   **Duration:** June-09 to April-10.
Skills: C, C++, Java, GDB, Multithreading & Network Programming, Shell Script, Valgrind, Make, Perl, PHP, Linux, SVN, MySql, DB2.

Access Control Appliance.
This is a centralized Web access management system that provides multi-form factor authentication and enables user authentication, single sign-on (SSO) with federation, policy-based authorization & identity management.
Involved in Design and Implementation of

- Protocol Authentication module (PAM) for Form, Digest, OTP and Basic authentication.
- Protocols like, SAML1.1, SAML 2.0, Kerberos (RFC 1510), SOAP (Encoder/Decoder) and RFC4122 (UUID generation).
- Utilities like, ODBC connector, XML Security, Socket, Memory Management, thread, Mutex, MD5, SHA2.
- Algorithm for keypair credential translation & service token validation.
- Possess ownership of multiple modules, Responsible for releasing builds, Solving Stability issues of the product and product deployment.

Virtual Firewall
It is a platform that addresses the needs of firewall security in virtual environments

- Involved in Design and Implementation of kernel modules like (NFHooks) Net filter hooks, and Fast Path attack check.

ATOS Origin India Pvt. Ltd.   **Duration:** Sept-08 to June-09.
Skills: Java, C++, Eclipse IDE, Windows.
- AOIFTS – Secure File Transfer System.
- WUMiner - System for Web usage mining and data warehouse.

M.Tech Thesis/Research Work:
Performance Analysis and Evaluation of Authenticated encryption schemes at the link layer Security in wireless sensor networks. (C, C++, Java, TinyOS, Linux, Matlab).
Implemented and compared the performance of the various block cipher algorithms viz. AES, Skipjack, Kasumi, Camellia, XXTEA in different novel advance modes of operations viz. OCB, CCM, EAX and others. Analysing the comparison, we proposed a new application based configurable link layer security mechanism for wireless N/W systems which has clearly demonstrated the efficiency gained in speed, storage, energy consumption and throughput relative to the strength in security of proposed link layer security over existing mechanism.

Microcosm Software Consultancy Pvt. Ltd.   **Duration:** June-04 to March-06.
Skills: Java, J2EE, C++.
- Automated Banking System.
- Electro Cardiogram System.
- Automated Sales Transaction Monitoring System.

Additional Information

1. Awarded with outstanding contribution award at Pivotal, VMware, Jan 2015
2. Participated into the Third International Conference on Wireless Communication and Sensor Networks-2007 at IIIT, Allahabad.
3. Qualified *GATE-2006* in Computer Science with All India Rank 682, **(96.92%tile)**.
4. Ranked 1st in SSC and 2nd in HSC at district level.

(Nilkanth Patel