
MADHUKAR SHRESTHA

sthamadhukar@gmail.com | 405 856 8302 | sthamadhukar.com.np

PROFESSIONAL SUMMARY:

- Extensive IT experience in web application analysis, design, development, and deployment of enterprise applications with strong expertise on **Object Oriented JAVA, J2EE and Client Server technologies and PHP.**
- Experience in software Development Processes like **SDLC, Waterfall, Test Driven Development (TDD), Iterative and Agile Methodologies.**
- Expertise in developing applications using **Java, JSP, Grails, Spring, JDBC, JNDI, XML, UML, Hibernate, Microservices, Web Services, AJAX, HTML5, CSS, Java Beans, JavaScript.**
- Experience with Apache **Hadoop** for storage part in HDFS (Hadoop Distributed File System) and big data analytics.
- Good experience on working with **Amazon Web Services** like **EC2, S3, Amazon DynamoDB, Amazon RDS, Amazon Elastic Load Balancing, Amazon SQS, Hadoop EMR clusters, AWS Cloud Watch** and Amazon CloudFront.
- Familiar with AWS Identity and access management (**IAM**) role-based configuration setup for access to AWS resources to different users.
- Experience in creating build scripts using Ant, **Maven** and **Gradle** tools.
- Experience Full - Stack/Front-End development experience building, deploying, and maintaining web apps with **CSS3, JavaScript, AngularJS, ReactJS, Redux, HTML5, Bootstrap, NodeJS, AJAX** and **JSON.**
- Experience with **JavaScript, HTML5, CSS3 (Bootstrap, Media Queries), jQuery UI plugin** Skilled in creating Single Page Applications (**SPA**) using **AngularJS directives, data binding and routing.**
- Experienced in **webpack, ES6, React API, Ajax; ES6** makes **JS** so much more powerful.
- Worked on Big Data Integration & Analytics based on **Hadoop, SOLR, Spark, Kafka,** and Java Cascading.
- Experience in Integration of Amazon Web Services **AWS** with other applications infrastructure.
- Extensive experience in working with different **MVC Frameworks** like **Spring, Grails** and **ORM** (Object Relational mapping tools) like **Hibernate.**
- Strong experience in **MVC architecture** and design implementation using **Servlets and JSP** as well as open-source frameworks such as **Grails** and **Spring Boot.**
- Extensive experience in **Core Java, Servlets, JSP, JavaScript, JDBC, JSTL, Struts, JSF, EJB, JNDI, AJAX** and Custom tag Libraries
- Experience in developing multi-tier Enterprise Applications using **IntelliJ, VSCode, Eclipse, Pycharm, PHPStorm.**
- Proficient in Java/J2EE **Design Patterns** including **singleton, command, object pool, session facade, Model View Controller (MVC), Data Access Object (DAO).** Well versed with core Java concepts like collections, multithreading, serialization, **Java beans.**
- Experience with Web/Application servers **BEA WebLogic, IBM Web Sphere, Apache Tomcat, RESTFUL API, Java 8, Docker, Kubernetes, Hibernate** and **AWS.**
- Experience working in **Microservices Architecture** in a Cloud environment. **Java microservices** in **Spring Boot** along with security and able to provide solution, design and develop applications in Microservices Architecture and design patterns.
- Experience in developing **ANT scripts and Maven Scripts** for the build and deployment of **J2EE applications.**
- Extensive experience in **SQL, PL/SQL** programming, **stored procedures, triggers** and **Query optimization** with **Oracle, MS-SQL** and **MySQL** databases. Written queries for **insert update** and **modification** operations. Performed **database normalization** and **optimization** using **database tools.**
- Experience in working version control tools like **CVS, Git** and **SVN.**
- Ability to learn and adapt quickly to the emerging new technologies and paradigms.
- Excellent communication, interpersonal and analytical skills, and a highly motivated team player with the ability to work independently.

TECHNICAL SKILLS:

Languages	JAVA, C, C++, J2EE, PL/SQL, PHP, Python
APIs	REST, SOAP,, AWS APIs, Apache SOLR/Lucene, JDBC, JNDI, JPA, JSF, JSTL, EJB
Design Patterns	MVC, DAO, DTO, Front Controller, Session Facade, Business Delegate, Observer, Singleton
Frameworks	Java Cascading, Hadoop, Hibernate, Spring, Spring Boot, Grails, JSF, Apache Kafka, Laravel, Flutter
Cloud Services	Amazon EMR, SQS, Lambda, Redshift, S3, Google Firebase,
Scripting/GUI Tools	HTML, JSON, JavaScript, CSS, Shell Script, JavaScript, Angular, TypeScript development skills. jQuery, React.js, Angular.js, Backbone.js, Require.js, Node.js, Bootstrap.
Application Servers	Apache Tomcat, WebSphere, NGINX
IDE	IntelliJ, VS Code, Eclipse, PyCharm, PhpStorm
Databases	Oracle, MySQL, SQL Server, MS Access, JDBC, Connection Pooling/Data Source, Stored procedures, Packages, Triggers, Cursors, Views, Indexing, MongoDB, Amazon Redshift
Operating Systems	Windows Variants, Unix, Linux, MacOS

EDUCATION:

- Master of Science in Computer Science, **University of Central Oklahoma**, Edmond, Oklahoma, USA - 2023
- Bachelor Science in Information Technology (Computing), **Islington College** (affiliated to **London Metropolitan University**), Kathmandu Nepal - 2014

WORK EXPERIENCE:

Research / Teaching Assistant

University of Central Oklahoma

Jan 2022- May 2023

- Conducted research for dataset creation on cyber security incident analysis and system behavior.
- Analyzed the system and network calls during vulnerability exploitation and backtracking algorithm
- Contributed on a research paper based on the findings of research.
- Experience with Linux, sysdig tool, AWS services, Docker, Git, Github Actions.
- Experience with shell scripting, automation, python, CWE, CVE and cybersecurity approaches.
- Developed backend service using postgres, SpringBoot, Hibernate implementing protocol buffers for gRPC calls.

Role: Senior Software Engineer (Data Analytics)

Deerwalk Services (acquired by Cedar Gate Technologies in Dec 2020), Nepal

Jan 2017 – Aug 2021

Responsibilities:

- Worked on Big data analytics (US Healthcare) as a java cascading developer with experience in requirement analysis, design, Implementation, integration, deployment, testing, debugging, documentation, maintenance/ support for stand-alone software application for Data Extraction, Transformation and Load on Hadoop platform.
- Java web developer with experience in application analysis, design, development, integration, deployment, performance tune- up, documentation, debugging and support for web, client-server-based application using Object Oriented Programming concepts, Java, Grails Framework, Web Services (REST, SOAP), JavaScript, HTML, CSS, AJAX, jQuery, and AngularJS.
- Experience with both Maven and Gradle based dependency management and build tools.

- Experience with Data ETL process using cascading framework and Spark based on requirements provided by Data analyst.
- Developed rule-based data processing and transformation tool for data mapping using the in-house syntax and terminologies to remove the dependency of java code for client file implementation.
- Involved in development of parser tools for EDI data received from clients for US Healthcare data analytics.
- Developed web application as a data mapping tool using java framework, MySQL, Angular JS, PEG parser (PEG.js)
- Involved in building REST APIs for communicating with different web applications related to each other.
- Implemented AWS SQS, AWS Lambda for job queuing and automation of processes.
- Had knowledge of AWS S3, EMR Clusters, EC2 instances, RDS Servers, AWS RedShift, AWS Cloudwatch, DynamoDB.
- Experience with AWS IAM based authentication and authorization for access control.
- Built scripts based on python for task automation, AWS instances launch, Job execution, report generation, Data import to redshift and sprint release process automation.
- Worked along with the DevOps team for CI/CD using Jenkins for both web application and data mapping tool deployment.
- Use agile methodology and participate in Scrum meetings.
- Build the application using TDD (Test Driven Development) approach.
- Develop a technical design document for the implementation based on the requirement from Business Analyst.
- Involve in developing UML Use case diagrams, Class diagrams, and Sequence diagrams.
- Involve in Database design, analysis, data migration and workflow of the project to address the change in requirement.
- Used AWS X-Ray for monitoring the performance and debugging of the web application.
- Used AngularJs MVC framework for developing the Single Page Application (SPA).
- Deploy and test the application using the Web logic application server.
- Deploy data mapping tool and test for the data quality based on data specification.
- Worked as Offshore lead to gather business requirements, participate in discussions, and support other teams.
- Involve in team meetings, brainstorming, code reviews, debugging and handover sessions.
- Debug the data issues and fix them for the data mapping tool. Participate in issue debugging/resolution for web applications interrelated with data mapping engines.
- Develop strategies and scripts for database optimization using stored procedures, indexing for MySQL databases.
- Use version control tools like SVN or GIT for version control across common source code used by developers and Amazon CodeCommit for pull requests.

Environment: Java, Hadoop, Cascading, Python, Spark, Grails, Angular JS, jQuery, JSON, Bitbucket, Git, Jenkins, Maven, Gradle, MySQL, AWS Redshift, EMR, AWS s3, AWS Lambda, AWS SQS, CloudWatch, REST API, Linux

Role: Software QA Engineer

Deerwalk Services, Kathmandu

Apr 2015 – Dec 2016

Responsibilities:

- Involved in Business and software requirement review and validation
- Involved in Test plan, test cases development and test execution for both manual and automated.
- Defect reporting and participating in team meetings.
- Worked as a support for the client issues related to US healthcare data analytics and web application.
- Test data preparation for analysis and integrity check of data manipulation engine.
- Involved in various testing approaches including penetration testing, performance testing, security testing using different tools like JMeter, in-house automation tools and many others.
- Worked on different SQL / NoSQL databases systems including MSSQL, MySQL, Elasticsearch queries.
- Performed task for configuration management of different web applications built using C# and Java Grails framework.
- Developed Keyword driven QA automation tool for in-house application testing and validation using Java and Selenium.

- Created scripts and stored procedures for the quality assurance of data feed mainly on redshift, MSSQL and MySQL.
- Use version management tools like SVN and git for tracking test documents/ requirements.

Environment: Java, Selenium, MySQL, MSSQL, Redshift, Elasticsearch, Git, QA Automation, JMeter

Role: Web Developer (Java/ PHP)

Webtech Nepal, Kathmandu

Mar 2019– Aug 2021

Responsibilities:

- Worked as a freelance web application developer for various projects built mostly using Spring, Grails and Laravel.
- Involved in Requirement analysis, Design, Development and Support phases of Software Development Life Cycle (SDLC).
- Expertise in various open-source frameworks like Spring 3.0, Spring Boot, Grails, Spring Web flow, JSF1.2/2.2, and ORM Technology like Hibernate 3.0 and GORM.
- Worked on various PHP projects based on Laravel framework having blade templates and object-oriented approach.
- Experience with multiple Servers like NGINX, Apache Tomcat, IBM WebSphere, WebLogic, Sun Glassfish and JBoss.
- Expertise working with standard JAVA Design Patterns (Singleton, Session Facade, Front Controller, DAO, DTO, MVC and Business Delegate).
- Developed UI layout and forms for widgets using AngularJS, JavaScript, HTML5, CSS3, jQuery and used JSON data format and followed Agile Scrum for application development.
- Used agile methodology and participated in Scrum meetings.
- Build the application using TDD (Test Driven Development) approach.
- Involved in developing UML Use case diagrams, Class diagrams, and Sequence diagrams using StarUML and Microsoft Visio.
- Involved in database design and update for various projects from scratch as well as to accommodate changes.
- Developed Custom Tags to simplify the JSP code. Designed UI screens using JSP, CSS, XML and HTML. Used JavaScript for client-side validation.
- Actively involved in designing and implementing the application using various design patterns such as Singleton, DAO, Front Controller, Service Locator, Business Delegate, Facade and Data Access Object.
- Developed Web services for sending and getting data from different applications using REST APIs.
- Used Junit framework for unit testing of application and Log4j to capture the log that includes runtime exceptions.
- Used Git for version control for implementing the application.

Environment: J2EE, IBM WebSphere, JSP, Servlets, JMS, XML, REST, DOM, JavaScript, StarUML, UML, HTML, Bootstrap, Git, Log4J, Junit, Laravel, Oracle and Windows.