**Vignesh Selvaraj Nadar**

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# PROFESSIONAL SUMMARY

* Overall 8 years of expertise in Java backend development, focusing on all phases of the Software Development Life Cycle (SDLC) with proficiency in JAVA/J2EE technologies, coupled with extensive experience in cloud technologies, including AWS and Azure.
* Extensive experience in Core Java, including Concurrency, Multi-threading, Synchronization, Exception Handling, File Handling, Serialization, and De-Serialization.
* In-depth knowledge of Java 8 features like Lambda Expressions, Streams API, Date Time API, Default and Static methods in Interfaces.
* Solid background in designing and developing web-based applications using Java/J2EE, JSP, Servlets, Spring IOC, Spring MVC, Spring JTA, Spring IO, Spring AOP, Spring Security, Spring Boot, Spring Data, Spring Batch, Hibernate, JDBC, and Web Services (SOAP & Restful services).
* Skilled in developing and deploying Microservices using Spring Boot and Spring Cloud.
* Experience with server-side scripting using Node.js.
* Proficient in creating build scripts using Ant, Maven, and Gradle tools.
* Knowledgeable in deploying applications using Docker containers, building Docker images, and utilizing Docker Hub and Docker-registries.
* Familiarity with Kubernetes for container orchestration.
* Strong background in AWS cloud services, including AWS Lambda, EC2, Simple DB, RDS, Elastic Load Balancing (ELB), SQS, SNS, AWS Identity and Access Management, AWS CloudWatch, AWS EMR, and additional exposure to Azure services.
* Skilled and results-driven Java Developer with of experience in designing, developing, and deploying enterprise-level Java applications. Proficient in Object-Oriented Programming (OOP) principles, with a solid foundation in Java and expertise in building scalable and maintainable software solutions.
* Experience with Azure services such as Azure Functions, Azure Virtual Machines, and Azure DevOps.
* In-depth understanding of deploying applications on cloud platforms, emphasizing AWS infrastructure.
* Expertise in version control systems such as Git and SVN.
* Proficient in Jenkins for Continuous Integration and Continuous Deployment (CI/CD) and code analysis tools like SONARQUBE.
* Solid understanding of issue-tracking tools such as Jira, VersionOne, and Agile Central.
* Well-versed in using different IDEs like Eclipse, Visual Studio, and IntelliJ.

# SKILLS

**Languages:** Java, Python, C, C#, C++, CSS, HTML, SQL, Typescript, Javascript, PHP, R, PostgreSQL, NoSQL

**Amazon Web Services:** CloudFormation, Lambda, S3, EC2, IAM, LexBot, CloudWatch, SageMaker, DynamoDB

**Cloud technologies:** Docker, Kubernetes, Prometheus, Serverless Computing, Virtualization, Cloud Security

**Machine Learning:** Python – Matplotlib, sklearn, KNN, CNN, Deep Learning, TensorFlow, Google Cloud ML **Engine** **Big Data:** MongoDB, PL/SQL, R Programming, Data Mining, HDFS, PySpark, Apache Spark, Apache **Kafka CI/CD:** GitHub, GitLab, Jenkins, U-Deploy, GIT, Bitbucket

**Development Methodologies:** Agile, Scrum

**OOP Principles:** Encapsulation, Inheritance, Polymorphism, Abstraction

**Others:** iOS/Android App Dev, Agile, Scrum, Shell Scripting, IoT, Business Process Improvement

# PROFESSIONAL EXPERIENCE

**Amazon, New York City, New York July 2022 - Dec 2023**

**Java/J2EE Developer:**

* Orchestrated the design and implementation of the Global Location Widget (GLOW), utilizing Java, Spring Boot, Guice, and AWS services to develop microservices and REST API endpoints.
* Spearheaded the migration of the GLOW Notification legacy service to a scalable Software as a Service (SaaS) framework on AWS, resulting in $10 million annual cost savings.
* Engineered GPS Location functionality for GLOW using Hadoop, Scala, and Infrastructure as Code (IaaC) concepts, achieving a 90% increase in location accuracy.
* Led the team through multiple High Volume Events, ensuring the resilience of services by handling peaks of 70,000 transactions per second (TPS) without interruption.
* Demonstrated extensive proficiency in Core Java, implementing robust and scalable solutions for mission-critical components.
* Implemented core OOP concepts such as encapsulation, inheritance, and polymorphism to build modular and extensible codebase.
* Utilized Spring Framework extensively for dependency injection, AOP, and MVC architecture, contributing to the modular and maintainable design of applications.
* Implemented efficient algorithms in Core Java, applying data structures and algorithmic principles to optimize system performance and resource utilization.
* Managed AWS resources effectively, utilizing services such as AWS Lambda, EC2, S3, and RDS for seamless integration and optimal performance.
* Utilized Docker for containerization and Kubernetes for orchestration, enhancing scalability and deployment efficiency of Java applications.
* Implemented RESTful APIs using JAX-RS and Spring Web MVC, facilitating seamless communication between application components.
* Employed JUnit and Mockito for unit testing and integration testing, ensuring the reliability and correctness of Java applications.
* Demonstrated expertise in database technologies, including SQL, NoSQL, and ORM frameworks like Hibernate, for efficient data management and persistence.

**Environment:** Java/J2EE, Spring Framework (IOC, MVC, Boot, Cloud, Data, Batch), Microservices Architecture (Spring Boot, Spring Cloud), Docker, Kubernetes, OpenShift, AWS Cloud (Lambda, EC2, Simple DB, RDS, ELB, SQS, SNS, IAM, CloudWatch, EMR), Hibernate ORM, JDBC, RESTful Services (JAX-RS, Jersey, Apache CXF), Apache Kafka, Junit, Mockito, Cucumber, Maven, Gradle, Ant, Git, SVN, Jenkins, SONARQUBE, Jira, VersionOne.

**Resideo Technologies Inc**, **New York City, New York** **Oct 2020 - Jun 2022**

**Software Developer:**

* Developed a custom Object Detection Machine Learning model for an Automated Ground Vehicle, enabling real-time tracking of up to 30 distinct objects concurrently.
* Applied advanced computer vision techniques using Tensorflow and YOLO (You Only Look Once), enhancing application efficiency and accuracy.
* Applied OOP principles to design modular components, facilitating code reuse and extensibility.
* Demonstrated proficiency in Machine Learning and Computer Vision, contributing to the successful implementation of a robust Object Detection system.
* Utilized Core Java skills to optimize backend functionality, ensuring smooth execution of the Object Detection ML Model.
* Leveraged J2EE technologies (JSP, Servlets, spring frameworks) for backend development, enhancing application performance.
* Deployed, scaled, and managed computational resources using AWS Cloud services (Lambda, S3, EC2) for the Object Detection system.
* Designed and implemented efficient algorithms in Core Java, contributing to high-performance standards.
* Streamlined backend development using Spring Boot, enhancing modularity and scalability.
* Implemented RESTful services (JAX-RS) for seamless communication between application components.
* Demonstrated expertise in AWS Cloud architecture, incorporating services like Lambda, EC2, and S3 for optimal functionality and scalability.
* Implemented server-side logic using Java to ensure reliability and efficiency of backend components.
* Environment: Machine Learning (Tensorflow), Computer Vision (YOLO - You Only Look Once), Core Java, J2EE (JSP, Servlets), Spring Boot, RESTful APIs (JAX-RS), AWS Cloud (Lambda, S3, EC2), Git, Lean Six Sigma, Junit.

**Tata Consultancy Services**, **Mumbai, India June 2019 - Aug 2020**

**Java Developer:**

* Spearheaded the development of Microservices and REST APIs utilizing Java Spring Boot, .NET Framework, and React.js, resulting in annual client savings exceeding $400,000. Employed GitHub, Jenkins, and UrbanCode deploy for robust and efficient CI/CD processes.
* Utilized Java and Python to architect and implement scalable distributed systems, optimizing transaction processing efficiency and security. Implemented Docker for containerization of legacy applications, achieving an impressive 70% reduction in deployment times.
* Engineered high-performance data processing pipelines using Spark, Hadoop, and Kafka, elevating analysis capabilities by 80% and ensuring streamlined data workflows.
* Led the migration of static data into both relational and non-relational databases, employing technologies such as MongoDB and Postgres. This initiative significantly improved data storage and access, enhancing overall system performance.
* Recognized with multiple On the Spot awards for outstanding contributions and a Best Team Member award, showcasing dedication and excellence in teamwork.
* Applied Core Java skills to design and develop the backend of Microservices, ensuring the implementation of robust and scalable financial solutions.
* Utilized Java Spring Boot to create Microservices, enhancing the modularity and maintainability of the Treasury Management Applications.
* Implemented RESTful APIs, leveraging Java frameworks, to facilitate seamless communication between different components of the application.
* Utilized AWS Cloud services, including Lambda, API Gateway, and EC2, to deploy and manage the Microservices infrastructure, optimizing performance and scalability.
* Contributed to the establishment of effective CI/CD pipelines, ensuring efficient testing, integration, and deployment of Microservices using Jenkins and UrbanCode deploy.
* Applied Java multithreading and concurrency concepts to optimize the performance of financial applications within the Microservices architecture.
* Demonstrated proficiency in backend development with Java, contributing to the overall success and efficiency of the Treasury Management Applications.
* Environment: Java Spring Boot, .NET Framework, Microservices Architecture, RESTful APIs, GitHub, Jenkins, UrbanCode Deploy, Lean Six Sigma, Core Java, J2EE (JSP, Servlets, Spring), AWS Cloud (Lambda, S3, EC2, API Gateway), Junit, Git.

**Pinaka Aerospace Solutions, Bangalore, India June 2016 - Aug 2019**

**Software Developer:**

* Orchestrated the design and implementation of a distributed computing solution using Spark, achieving a substantial 60% enhancement in image processing speeds.
* Engineered resilient RESTful APIs and explored GraphQL to refine data retrieval processes for Pinaka's internal tools. This initiative yielded a flexible and efficient data access strategy, fostering enhanced collaboration across cross-functional teams.
* Pioneered the implementation of real-time data processing using Kafka, contributing to optimized system responsiveness and operational efficiency.
* Applied AWS and Terraform for streamlined cloud infrastructure management, resulting in a significant reduction in operational costs.
* Contributed to the low-level programming and optimization of software components, ensuring optimal performance and reliability of the Undercarriage Display Unit.
* Applied Core Java principles to enhance the functionality and efficiency of the software, meeting the specific needs of the aircraft's undercarriage display system.
* Utilized AWS Cloud services, including EC2 and S3, to implement cloud-based solutions for data storage and processing related to the Under Carriage Display Unit.
* Demonstrated expertise in software development for embedded systems, focusing on the unique challenges and requirements of aviation applications.
* Contributed to the overall success of the project by applying best practices in Core Java and leveraging cloud services to enhance the performance and capabilities of the software.

**Environment:** Core Java, Embedded Software Development, AWS Cloud (EC2, S3), J2EE (JSP, Servlets), Low-level Programming, Aviation Software Development, Git

# ACADEMIC PROJECTS

## Gaze - Smart Photo Album

Photo Album application that uses Neuro-Linguistic Processing to search images using voice and text

## Autonomous Vehicle Vision

Developed custom Object Detection models using TensorFlow and YOLO to provide an AGV with Computer Vision

## Jarvis Dining Concierge

AI- Chatbot that provides dining recommendations, given the location, and cuisine preference along with other parameters.

## CoviShield Vaccine Availability Notifier

Check COWIN portal regularly to find vaccination slots available for a given Zip Code and Age Group

## Smart Home Automation Using Hand Gesture Recognition

This recognition system uses ML to distinguish between trained gestures and identification to control home appliances

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# ACHIEVEMENTS AND LEADERSHIP

* LEAN Six Sigma Certified **March 2020**
* President of Robotics Club at Amity University **August 2018**