**Marvin Delos Santos Santos**

*Senior Backend Engineer | AI/ML, Microservices, and Scalable Systems*

Pampanga, Philippines *|* +63 993 679 1392 **|** marvin828santos@gmail.com

<https://www.linkedin.com/in/marvin-santos-069157344>

**Summary**

Experienced **Backend Engineer** with 12+ years of expertise in designing, building, and optimizing **scalable backend systems**, complemented by hands-on experience in **frontend integration** and **cross-functional collaboration**. Proficient in **microservices architecture**, **cloud-native solutions**, and **AI/ML integrations**, delivering high-performance, enterprise-grade applications across **fintech**, **healthcare**, **e-commerce**, and **retail domains**. Adept at **mentoring junior developers**, aligning technical objectives with business goals, and driving innovation through **automation** and **modern development practices**. Skilled in a diverse tech stack including **Go (Golang)**, **Python**, **Java (Spring Boot)**, **Node.js**, and **.NET Core**, and experienced with **cloud platforms** like **AWS**, **Azure**, and **GCP**. Known for achieving measurable results, such as reducing operational costs by **30%**, improving system latency by **20%**, and enhancing team productivity by **25%** through scalable solutions and streamlined workflows.

**Skills**

**Programming Languages**

* **Backend Development**:Go (Golang), Python, Java (Spring Boot), Node.js (JavaScript), C# (.NET Core), PHP (Laravel)
* **Frontend Development**: JavaScript, TypeScript, HTML, CSS
* **Database and Query Languages**: PostgreSQL, MySQL, Amazon Redshift, MongoDB, Redis, Elasticsearch, SQL, NoSQL

**Frameworks and Libraries**

* **Backend Frameworks**: Flask, FastAPI, Spring Boot, Hibernate, Express.js, Django, Laravel, Echo (Go), Gin (Go)
* **Frontend Frameworks**: React, Angular, Vue.js
* **AI/ML Libraries**: TensorFlow, PyTorch, scikit-learn, ONNX runtime, NumPy, Pandas
* **Data Processing Frameworks**: Apache Kafka, Apache Spark, Apache Nifi, Airflow, AWS Glue

**Cloud and DevOps**

* **CI/CD Tools**: GitHub Actions, Jenkins, ArgoCD, Helm, Terraform
* **Cloud Platforms**: AWS (Lambda, S3, EC2, RDS, Glue, CloudFormation, CloudWatch), Azure, GCP (Google Cloud Platform)
* **Containerization and Orchestration**: Docker, Kubernetes

**Methodologies**

* Agile (Scrum, Kanban), DevOps, Test-Driven Development (TDD), Behavior-Driven Development (BDD), Domain-Driven Design (DDD)
* Event-Driven Architecture (Apache Kafka), Microservices Architecture, RESTful Design Principles

**APIs and Integration**

* RESTful APIs, GraphQL APIs, Third-Party API Integration, OAuth, Payment Gateway APIs (PCI-DSS Compliant)

**Performance and Testing**

* **Load Testing and Profiling**: JMeter, Postman, Selenium, New Relic
* **Backend Profiling Tools**: Pyroscope, pprof

**Tools and Platforms**

* Jira, Confluence, Slack, Lucidchart, Power BI

**Soft Skills**

* Team Leadership and Mentoring: Coaching junior developers, conducting code reviews, leading workshops
* Collaboration: Working with cross-functional teams, stakeholder management, aligning technical objectives with business goals
* Communication: Client presentations, technical documentation (Lucidchart, Confluence), reporting via Power BI

**Experience**

**Lead Backend Engineer | Photon Commerce (2024/03–2024/10)
San Francisco, CA, USA**

* Architected fault-tolerant **microservices** using **Go (Golang)** and **Python frameworks** (**FastAPI**, **Flask**) deployed on **Kubernetes**, ensuring **99.9% uptime** for mission-critical fintech systems.
* Designed and deployed an **AI-powered invoice processing platform** using **OCR technology**, achieving **90% data extraction accuracy** and reducing manual processing times by **30%**.
* Enhanced backend performance with **Redis caching**, **PostgreSQL**, and advanced profiling tools (**Pyroscope**, **pprof**), ensuring stable performance under peak loads.
* Streamlined **CI/CD pipelines** using **GitHub Actions**, **ArgoCD**, and **Docker**, achieving a **25% reduction in deployment cycles** and improving feature rollout reliability.
* Automated workflow orchestration by integrating **AI/ML models** for anomaly detection and predictive insights, streamlining operations for enterprise clients.
* Designed and integrated **Node.js APIs** to deliver real-time updates, enhancing **React-based dashboards responsiveness** **by 25%** and improving user interactions.
* Worked closely with frontend developers to ensure seamless API integration, optimizing backend workflows for enhanced **user experience.**
* Mentored and led a team of four junior developers, fostering expertise in **microservices design**, **cloud-native development**, and backend best practices. Streamlined onboarding process, reducing ramp-up time by **15%** and increasing overall team efficiency.
* Collaborated with product managers and cross-functional teams using **Jira** and **Confluence**, ensuring backend and frontend systems aligned with business objectives.

**Senior Software Engineer | Cognizant (2021/03–2024/02)**Teaneck, NJ, USA

* Led the migration of legacy monolithic systems to **Spring Boot-based microservices architectures**, orchestrated with **Kubernetes**, reducing operational costs by **30%** and enhancing system scalability.
* Developed **AI-powered** **fraud detection APIs** using **Apache Kafka** for real-time streaming and **supervised learning models** (**scikit-learn**, **TensorFlow**) to identify anomalies in real-time transactions, reducing false positives by **25%**.
* Built scalable **data pipelines** capable of processing **10TB+ of daily data** using **Apache Spark**, **Airflow**, and **AWS Glue**, improving query performance by **50%** and enabling real-time analytics.
* Directed the development of a **personalized recommendation engine** for an e-commerce client, integrating collaborative filtering algorithms and backend services, increasing user engagement and driving a **20% boost in sales**.
* Designed secure APIs for third-party payment integrations using **.NET Core**, ensuring compliance with **PCI-DSS standards** and reducing transaction processing speeds by **15%**.
* Collaborated with frontend teams to design **API endpoints optimized for real-time updates on React and AngularJS dashboards**, ensuring seamless visualization of backend data.
* Streamline **CI/CD** processes with **Jenkins**, **Terraform**, and **Helm**, minimizing deployment downtime during high-traffic releases.
* Conducted technical workshops for five engineers on **Spring Boot**, **SQL query optimization**, and **Kubernetes best practices**, reducing defect rates by **15%**.
* Led client-facing presentations of backend architectural designs, illustrating seamless frontend integration strategies with **Lucidchart** and **Power BI**, and aligning technical solutions with business goals.

**Backend Engineer | Cognizant (2017/01–2021/03)**

* Developed scalable and secure **RESTful APIs** for healthcare systems using **Spring Boot** and **.NET Core**, ensuring compliance with **HIPAA** and **GDPR** standards.
* Re-engineered **ETL workflows** with **Apache Nifi** and optimized data ingestion pipelines, reducing processing times by **40%** and ensuring data availability for real-time reporting.
* Implemented caching and query optimization strategies with **Redis** and **Elasticsearch**, improving database query response times by **30%**.
* Built real-time payment systems using **AWS Lambda** and **Node.js**, reducing transaction latency by **20%** and scaling throughput to handle high traffic loads.
* Worked alongside frontend teams to ensure APIs met the requirements of **AngularJS healthcare dashboards**, reducing integration challenges by **20%.**
* Played a key role in migrating on-premises systems to **AWS cloud infrastructure**, leveraging **S3**, **EC2**, and **CloudWatch** for high availability and scalability.
* Conducted rigorous performance testing using **JMeter** and automated end-to-end testing with **Postman** and **Selenium**, ensuring system reliability under high loads.
* Collaborated with QA and product teams to identify inefficiencies, leading to a **20% improvement in backend performance** and reducing downtime during deployments.

**Backend Developer | Apexon (2013/01–2016/12)**Santa Clara, CA, USA

* Designed and implemented scalable **RESTful APIs** using **Spring Boot**, **Laravel (PHP)**, and **MySQL**, enabling seamless integration with frontend systems and third-party services.
* Worked with UI developers to integrate APIs into **AngularJS-based retail applications**, reducing response times by 20%.
* Modernized legacy monolithic applications by transitioning to **microservices architectures** using **Spring Boot**, **Docker**, and **Kubernetes**, improving modularity, scalability, and fault tolerance.
* Developed real-time analytics systems using **Redis** and **Elasticsearch**, providing actionable insights for retail clients and boosting decision-making efficiency.
* Enhanced backend performance by implementing caching strategies with **Memcached** and optimizing SQL queries, achieving **30% faster response times** for high-traffic endpoints.
* Built and optimized **ETL pipelines** using **Apache Nifi**, ensuring timely data processing for healthcare and retail analytics platforms.
* Worked closely with client stakeholders to gather technical requirements and deliver customized backend solutions, fostering strong client relationships.
* Conducted code reviews, documented system architectures in **Confluence**, and collaborated with QA teams to ensure adherence to best practices.

**Software Engineering Intern | Apexon (2012/10–2012/12)**

* Supported the development of backend components for a healthcare claims processing platform using **Java**, **Hibernate**, and **PostgreSQL**, improving query efficiency and data consistency.
* Debugged and tested APIs with **JUnit** and **Postman**, ensuring seamless integration with third-party tools.
* Gained experience in **SQL optimization** and **RESTful API** **development** while collaborating with senior engineers on performance improvements.

**Education**

**Master of Science in Data Science**
**Coleman University** – San Diego, California, USA
**June 2011 – September 2012**

* Specialized in **data analysis**, **distributed systems**, and **statistical modeling**.
* Key Project: Built a scalable ETL pipeline for large datasets using distributed processing concepts, improving data processing efficiency.

**Bachelor of Science in Computer Science**
**Coleman University** – San Diego, California, USA
**January 2009 – June 2011**

* Focused on **software engineering**, **algorithms**, and **database design**.
* Key Project: Developed a RESTful API for an academic data management system, enabling seamless integration with third-party tools.