CHOWDARY MANIKANTA YARRAMANENI

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SUMMARY

- IT professional with 5+ years experience in **Java/J2EE, React technologies, Data Structures and Algorithms**, Cloud infrastructure, System Design and proficiency in SDLC, **Agile, SCRUM methodologies**. Hands-on experience in projects involving **Artificial Intelligence (AI) and Machine Learning (ML)**, including model integration and automation solutions. Actively learning and working on advanced AI technologies, including **Generative AI (GenAI) and Large Language Models (LLMs)**, with a focus on practical applications, prompt engineering, and system-level integration.

TECHNICAL SKILLS

Programming Languages	Java (8/14/17), Kotlin, Scala, C, C++, C#, Python, JavaScript (JS), TypeScript (TS), VBA (Visual Basic for Applications), Shell Scripting (Bash), Streams, multi-threaded.
Web & **UI Technologies**	HTML, CSS, React.js, XML, JSP (JavaServer Pages), Angular, AngularJS, Vue.js, Node.js, JQuery, Ajax, Bootstrap, Babel, Webpack, GraphQL.
Frameworks, Middleware	SpringMVC, SpringBoot, SpringORM, Spring Integration, Microservices, SpringSecurity, Hibernate, UI/UX, Servlets, Apache Commons, EJB, J2EE, Apache Tomcat, Spark, JDBC, MapReduce.
Databases	RDBMS (Relational DBMS): MySQL, PostgreSQL, SQL Server, Oracle. NoSQL (Non-relational): MongoDB, Cassandra, Redis, HBase, DynamoDB
Big Data and Pipelines	Hadoop, Hive, Pig, Spark, Kafka, BigQuery, ETL (Extract Transform Load) data pipeline.
Cloud & **DevOps**	AWS (EC2, ECS, Lambda, RDS, VPC, IoT), Microsoft Azure App Services, Google Cloud Platform (GCP, GKE, GCS, Compute Engine, SDK), Docker, Kubernetes, Jenkins, GitLab CI, Travis CI, CircleCI, CI/CD(Continuous Integration/Deployment), Terraform, Prometheus, Grafana, ELK Stack(Elasticsearch, Logstash, and Kibana), NGINX, APIGEE.
Messaging Systems	Kafka, RabbitMQ, JMS (Java Messaging Service)
Testing Frameworks	JUnit, Mockito, Selenium, Cucumber, PyTest, Cypress, Mocha, Jest, Postman, JMeter, K6 TDD (Test-Driven Development), BDD (Behavior-Driven Development)
Version Control	Git (GitHub, GitLab, Bitbucket), SVN (Apache Subversion), Open Source ecosystems.
BI & **Analytics**	BI (Business Intelligence) tools, BigQuery, Metrics and Dashboarding, Capacity planning.
Platforms & **Tools**	Operating systems(Linux/Unix, Windows), JVM, SaaS (Software as a Service), PaaS (Platform as a Service), Firewall, VPC(Virtual Private Cloud), Visual Studio, Eclipse, IntelliJ IDEA, Maven, Gradle, NPM, Jasper Reports, Atlassian JIRA, Confluence, Code Quality tools, Secuity processes and tools, MS Office (Outlook, Excel, Word).
Engineering Practices	Agile, Scrum, SDLC (Software Development Life Cycle), Code Reviews, Documentation, UX/UI-Collaboration, Prototypes, Compliance, Production Support, Incident Response, Risk management, Communication skills, Attention to detail, Problem-solving.
Collaboration Skills	Cross-functional teams, Interpersonal communication/ Interpersonal skills, Decision-making,Project management, Product delivery, open-source projects
AI, ML Algorithms	Supervised Learning(Regression, Decision Trees, SVM, k-NN), Unsupervised (K-Means), Deep Learning, Natural Language Processing, Tokenization,TensorFlow,PyTorch,OpenCV.

WORK EXPERIENCE

Ultimate Tool & **Safety** Oct 2022 - Present
Software Engineer-(Java, ReactJS, REST API, Docker, GCP) *Arlington, TX*

About Project -
Asset Management Tracker: Led the comprehensive development of a full-stack, microservices-driven application designed to streamline the testing and tracking of diverse assets for multiple clients. This platform significantly

improved operational efficiency and provided a centralized real-time view of asset lifecycles.

Responsibilities:

- Developed highly scalable, full-stack microservices applications on Google Cloud Platform (GCP), encompassing front-end (React, Redux), back-end (Java 17, Spring Boot, and Spring MVC), and containerized deployments (Google Kubernetes Engine- GKE).
- Increased deployment efficiency by 40% by migrating J2EE microservices from legacy systems to GCP Cloud Run with containerized architecture.
- Migrated over 15 J2EE microservices from legacy virtual machines to GCP Cloud Run, enabling auto-scaling, reducing infrastructure cost by 35%, and improving deployment agility.
- Implemented secure and serverless deployments using GCP Cloud Run with IAM policies and VPC connectors, enhancing API availability and isolating workloads for better compliance and latency control for Spring-based applications.
- Designed and optimized MongoDB schemas for approximately 5 million asset records, reducing average query response time by 70% for Java applications.
- Built CI/CD pipelines using Tekton and GitLab CI, reducing build times to under 5 minutes and eliminating 90% of manual deployment errors for Java and Spring applications.
- Integrated Tekton pipelines with Kubernetes-native GitOps workflows to enable zero-downtime deployments and seamless rollback of failed releases for Spring microservices.
- Created and managed Tekton pipeline resources using YAML configuration and integrated them into version-controlled Infrastructure-as-Code (IaC) workflows with Terraform for Spring Boot deployments.
- Achieved over 90% unit test coverage using JUnit and Mockito, resulting in a 35% reduction in post-release bugs in J2EE applications.
- Implemented GCP Stackdriver monitoring and alerting to proactively detect and resolve 95% of production issues within SLA targets for J2EE services.
- Integrated GCP Pub/Sub and Cloud Logging for asynchronous event processing and improved audit trail accuracy in Java applications.
- Participated in Agile ceremonies, contributing to 10+ successful feature releases delivered on time across four sprint cycles for enterprise Java projects.
- Leveraged GCP services including Cloud Load Balancing, Cloud CDN, and Google Compute Engine (GCE) for robust system architecture, ensuring seamless data flow and high availability for J2EE systems.
- Developed complex SQL scripts and stored procedures within Cloud SQL for efficient data operations and advanced analytics in Spring applications.
- Revamped role-based access control using JSON Web Tokens (JWT) and Google Cloud Identity and Access Management (IAM), reducing unauthorized access incidents by 43% for Spring APIs.
- Integrated Elasticsearch (or Google Cloud Search/BigQuery for search analytics) to support secure, fast, and scalable search features in Java enterprise applications.
- Implemented Memorystore for Redis caching, improving data security and reducing query response time by 100% for Spring Boot applications.
- Automated critical procedures using Asynchronous JavaScript and XML (AJAX) and TypeScript, enhancing operational efficiency by 75% for full-stack J2EE solutions.
- Proposed and integrated SendGrid (or Google Cloud Email API) for email API-based alerting, boosting user engagement by 40% through timely customer service.
- Utilized containerization with Docker and Google Kubernetes Engine (GKE), ensuring high availability and seamless scaling in production environments for Java microservices.
- Designed and executed comprehensive unit, integration, and end-to-end tests for APIs and UI components using Jest, Mocha, and Cypress, improving software reliability by 30% for J2EE applications. Conducted load testing with JMeter and K6, validating system scalability under peak loads for Spring services.
- Developed TypeScript-based testing scripts to automate repetitive testing tasks, increasing testing efficiency by 50%.

- Developed and configured the frontend build pipeline for a client-facing asset management tracker, leveraging Webpack for efficient module bundling and code splitting, and Babel for modern JavaScript compilation, ensuring optimal application performance and maintainability, interacting with J2EE backends.
- Implemented robust frontend build processes using Webpack and Babel for a critical asset management tracker, optimizing asset delivery and reducing load times by 20% for diverse client dashboards, served by Spring APIs.
- Led the development and migration of monolith applications to microservices-based systems, enhancing scalability and deployment flexibility by 40% with a strong adherence to SDLC best practices and clean architecture principles in a J2EE context.
- Built and optimized workflows across business domains using Django and ORM frameworks, integrating with ServiceNow for IT Service Management (ITSM) automation, improving process automation efficiency by 30%.
- Planned and executed deployment strategies on GCP, leveraging Google Compute Engine (GCE) and Google Kubernetes Engine (GKE) for scalable and reliable cloud hosting for J2EE applications, including Cloud Load Balancing for traffic distribution.
- Configured NGINX as a reverse proxy and load balancer within the GCP environment for microservices applications, optimizing traffic distribution and enhancing the reliability and performance of critical Spring API endpoints.
- Set up detailed metrics, custom dashboards, and alerts using Google Cloud Monitoring and Cloud Logging, improving system reliability and reducing downtime by 60% for J2EE applications.
- Implemented Infrastructure-as-Code (IaC) tools like Terraform and Google Cloud Deployment Manager to provision and manage cloud infrastructure efficiently and consistently for Java deployments.
- Designed and implemented robust ETL processes using Cloud Dataflow and BigQuery to extract, transform, and load data across systems, optimizing data workflows for analytics and reporting for enterprise Java applications. Improved data security with granular role-based access controls within GCP, reducing query response time by 100% through strategic caching.
- Incorporated data-driven decision-making algorithms into features and business logic. Proficiently utilized Cloud Trace, Cloud Debugger, and Cloud Logging to diagnose production issues and ensure reliability within CI/CD pipelines for J2EE applications.

Graduate Student Assistant Jan 2022 – Sep 2022
State University of NewYork at Albany *Albany, NY, USA*

- Worked as a Student Assistant for the course named "Advanced Programming Concepts," which mainly focuses on Standard Meta Language, Ordered Hyperresolution, and Lambda Calculus. Graded assignments and monitored the academic progress of junior students.

Systems Engineer May 2019 - Dec 2021
Tata Consultancy Services Pvt ltd *Hyderabad, India*

- Developed the FTTP Tracker application at British Telecommunications (BT), integrating it with internal GIS (Geographic Information System) tools using advanced data structures, algorithms, and spatial mathematics, enabling high-performance visualization and routing.
- Led Agile ceremonies (daily standups, retrospectives) using Jira; reduced fiber/Ethernet connection paperwork by 45%, saving 150+ hours per field engineer.
- Built scalable back-end services using Spring (MVC, Core, AOP), Servlets, EJB, Hibernate ORM, and POJO classes. Applied OOP, SOLID principles, and design patterns (Factory, Singleton, Strategy); maintained modular codebase with 85% test coverage and 98% reusability.
- Designed responsive front-end with React.js and Redux/Flux architecture, improving user interaction and reducing page load time by 30%.
- Deployed Java EE components via Apache Tomcat and WildFly; integrated JDBC, JMS, and XML-based services for enterprise-level interoperability. Validated JPA entity constraints with Hibernate Validator, ensuring database integrity across deployments.
- Integrated RESTful and SOAP APIs using JAX-RS, JAX-WS, and Swagger/OpenAPI; implemented OAuth2 security, reducing API-related downtime by 60%. Implemented GraphQL APIs for efficient data fetching and flexible client queries; reduced over-fetching issues and improved front-end performance by 35%.

- Integrated API Gateway solutions like Apigee to manage, secure, and scale RESTful and GraphQL APIs, providing centralized traffic management and policy enforcement, which reduced API-related downtime by 60
- Developed scalable, concurrent backend modules in Scala using Akka and Play Framework; enhanced throughput and reduced processing latency in data-intensive workflows.
- Implemented NoSQL solutions with MongoDB, Redis, and Cassandra to support daily operations and provide low-latency access to structured data. Designed distributed applications, event-driven microservices using Apache Kafka and Rabbit MQ, reducing inter-service communication latency by 45%.
- Achieved 92% unit test coverage using JUnit, Mockito, TestNG; improved feedback loops with Arquillian and WireMock, cutting test time from 1 hour to 15 minutes. Automated CI/CD pipelines using Jenkins, GitLab CI, Maven, Gradle, Docker, and Kubernetes, reducing build and deployment time by 70%.
- Deployed cloud computing or cloud-native applications leveraging AWS (EC2, Lambda, S3, DynamoDB, RDS, ECS, CloudTrail, CloudWatch) and managed infrastructure using Terraform.
- Designed and implemented data pipelines with real-time and batch ETL processing using Hadoop, Kafka, Spark, AWS Glue, AWS Athena, and BigQuery for ingesting, transforming, and querying large-scale datasets; optimized data ingestion and reduced latency by 50% and accelerated analytics workflows, enabled predictive insights.
- Monitored system health using Prometheus and Grafana and ELK Stack; configured Prometheus Security Group (PSG) policies and implemented ISO-compliant security protocols and firewall/VPC configurations, cutting MTTR by 35%.
- Collaborated with cross-functional teams to gather user requirements, specs, and translate business specifications into scalable technical solutions using JSP, Spring MVC, and JSTL; multitasking cross-functionally in fast paced environments and effectively ensured alignment with business objectives and delivered high-impact features with 30% faster turnaround. Learned new technologies quickly and took an entrepreneurial approach to problem-solving, and extended to firmware software for non-volatile memory.
- Led code reviews and enforced compliance with ISO standards and security policies; provided production support and troubleshooting for Java-based applications, reducing post-deployment issues and maintaining 99.9% uptime.

Cyber Security Intern - Malware Analysis April 2018 – June 2018
Cybervie-Ionots Technologies Pvt Ltd *Hyderabad, India*

- Used **Regshot**, **SQLMap**, **OSForensics**, detected and neutralized malware, increasing malware detection accuracy by 25%, and removed rootkits with **GMER** and **RootRepeal**, enhancing system integrity by 40%.

SDE Intern - ASP.NET May 2017 – June 2017
Electronics Corporation of India Limited (ECIL) *Hyderabad, India*

- Created an intuitive, responsive web interface using **ASP.NET MVC** and modern front-end frameworks like **Bootstrap and JavaScript**. Implemented robust backend using **ASP.NET** Core.

EDUCATION

Master of Science, Computer Science, State University of Newyork at Albany, NY Jan 2022 – May 2023

Bachelor of Technology, Computer Science, RVR and JC College of Engineering, India July 2015 – Apr 2019

PROJECT EXPERIENCE

- **Centralized Event Planner - Internship** *[Java, ASP.NET, C#, HTML, CSS]* Revolutionized event management as an intern by crafting a Centralized Event Planner, streamlining coordination by 20%.
- **Ordered Hyperresolution - Master's project** *[Python, First order Logic]* The goal of minimizing the size of the clause set and swiftly removing the number of literals in the clause set is to increase the reasoning effectiveness of the resolution principle in propositional logic
- **Smart Billing** *[Python, ReactJS, YOLO V3 Object detection]* Pioneered Smart Billing solution merging Python, ReactJS, and YOLO V3 Object Detection. Achieved 30% reduction in billing errors, enhancing accuracy.
- **Product Shopping** *[Mongodb, Express JS, React JS, Node JS]* This is a MERN Stack project, in which we built an eCommerce shop using the MERN stack, Redux Toolkit, MongoDB database, seeded data, created the UI, managed the state with Redux, and authenticated with JWT.

- **Heart Disease Prediction using Data Mining Techniques** *[Python, Machine Learning Algorithms]* Engineered a groundbreaking Heart Disease Prediction system in Python, employing ML Algorithms. Achieved 90% accuracy in prognosis, aiding medical professionals in preemptive care.
- **Passport Automation System** *[PHP, HTML, CSS, Javascript]* Web application for effective dispatch of passports to all of the applicants in PHP, JS, CSS, HTML using the XAMPP tool.
- Built a dashboard in Vue.js and deployed it on Azure App Services.
- Built serverless APIs with GCP Cloud Functions for a microservices architecture.

CERTIFICATIONS

- **Amazon Web Services Cloud Practitioner** *[April 2025]*
- **MERN — eCommerce Platform** *[June 2023]* Credential ID: UC-263b06ad-58e8-464e-b2f2-efbdf35e8cae
- **Artificial Intelligence by Programming Hub** *[August 2022]* CREDENTIAL ID: 1659501164851
- **Theory of Computation by NPTEL IIT Madras** *[September 2017]* CREDENTIAL ID NPTEL17CS34S1310415