

# MANIKANDAN RM.

SENIOR SOFTWARE ENGINEER

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## ABOUT

With **over seven years** of experience, I am a passionate and experienced Software, ML Model Development & Design Engineer. My expertise lies in building and maintaining scalable, high-performance systems. I am proficient in Go, Python, and C++, and have a strong background in developing robust backend services. I also excel at optimising cloud infrastructure on AWS and managing Kubernetes environments. Additionally, I have proven ability to enhance system efficiency and reliability through CI/CD pipeline automation, diligent monitoring, and effective on-call issue resolution.

## AREA OF EXPERTISE

### Prima Facie Skills

Backend Software Development  
Application & Tools Development  
**Machine Learning Modelling**  
Data Analytics & Pattern Analysis  
Development Operations  
User and Customer Engineering  
Customer Experience

### Languages

Python  
Go Lang  
C++ 14  
Terraform

### Tools

Jenkins  
vSphere  
Docker  
AWS  
Git SCM  
Kafka  
SQL & Mongo

### Standards

FedRAMP  
SOC2  
Agile  
Lean-Agile

### Technologies

Message Queues  
Infra as Code  
Telemetry  
Monitoring  
Network Security  
Containerization  
SIEM & XDR  
DBMS

**7+ YRS**  
EXPERIENCE

**M.TECH**  
GRADUATE  
MASTER'S DEGREE

**3+ YRS**  
ML EXPERIENCE

**103K+**  
LINES CODED  
& INCREASING

**10+**  
AWARDS &  
RECOGNITIONS

## EXPERIENCE

7+ YEARS IN INDUSTRY

CISCO  
2025 AUG



**SOFTWARE ENGINEER (G8)**  
**MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE TEAM – BUSINESS ANALYTICS**

A data-driven Software Engineer specializing in sales analytics and business intelligence. I develop and implement robust data solutions to analyse product performance, sales team effectiveness, and market trends. My work involves creating predictive models and interactive dashboards that transform raw sales data into actionable insights, directly influencing strategic planning and setting achievable growth targets for the organization.

### KEY HIGHLIGHTS

- **Predictive Sales Forecasting:** Developed a machine learning model that analyses historical sales data to predict future product performance, improving sales forecasting accuracy by over 20%.
- **Performance Dashboards:** Engineered and deployed a suite of interactive Business Intelligence (BI) dashboards that provide real-time insights into individual and team sales performance, leading to a 15% increase in cross-selling opportunities.
- **Product Performance Analysis:** Built automated data pipelines that process and analyse sales metrics to identify top-performing products, contributing to strategic decisions that boosted the sales of high-margin items.
- **Goal-Setting Automation:** Created a system that analyses past performance and market trends to automatically generate data-driven sales goals for teams, ensuring alignment with the company's overall growth objectives.
- **Data Infrastructure:** Designed and maintained the data warehouse schemas used for sales reporting, reducing query times and improving the reliability of analytics across the department.

**NOTE:** IMPRESSIVELY PROVED THE MACHINE LEARNING MODELLING AND DEVELOPMENT ABILITY, & GOT TRANSFERRED TO THE DEDICATED TEAM FOR BUSINESS ANALYTICS WHICH WORKED PRIMARILY ON THE BUSINESS ANALYTICS, WITH PROMOTION.

2022 OCT



**CLOUD ENGINEER (G6)**  
**UMBRELLA IDENTITIES MANAGEMENT – RESEARCH & DEVELOPMENT**

As a Cloud Engineer, I specialized in developing high-performance, Go-based identity management services while ensuring 100% accuracy and SLA compliance. I enhanced the development lifecycle by automating testing with Python and Selenium, managing robust CI/CD pipelines in Jenkins, and deploying optimized, containerized applications with Kubernetes on AWS. My role also included creating custom debugging utilities and handling on-call responsibilities to guarantee exceptional system reliability.

2022 OCT



**CLOUD ENGINEER (G6) CONTINUED FROM PREVIOUS PAGE / NOT A JOB CHANGE**  
**UMBRELLA IDENTITIES MANAGEMENT – RESEARCH & DEVELOPMENT**

**KEY HIGHLIGHTS (CONTINUED)**

- **Go Service Development:** Engineered Go-based microservices for identity management, successfully achieving
- **Containerization & Cloud Deployment:** Deployed, managed, and optimized containerized applications on AWS using Kubernetes and Docker, enhancing system performance and scalability.
- **CI/CD & Automation:** Architected and managed robust CI/CD pipelines with Jenkins for automated builds, testing, and service deployments, significantly improving release efficiency.
- **Testing & Tooling:** Automated end-to-end testing frameworks with Python and Selenium, and developed custom utilities in Python, Shell, and C++ to streamline debugging and production simulations.
- **System Reliability:** Served as an on-call engineer, efficiently resolving production issues to maintain high system reliability and uptime.

**BARRACUDA**  
**2022 MAY**



**SENIOR SOFTWARE ENGINEER**  
**EMAIL SECURITY GATEWAY**

In my role as Senior Software Engineer for the Email Security Gateway (ESG), my primary focus was on enhancing product value and system reliability. I achieved this by developing critical features, optimizing the CI/CD pipeline for greater efficiency, and automating key development workflows. I also played a pivotal role in resolving customer escalations and implementing high-priority features, directly contributing to improved product stability and performance.

**KEY HIGHLIGHTS**

- **C++ Feature Development:** Engineered and enhanced critical C++ features for the Email Security Gateway (ESG) product, ensuring robust and effective protection for email communications.
- **CI/CD Pipeline Optimization:** Redesigned and deployed CI/CD pipelines using Jenkins to enable continuous integration, full automation, and accelerated feature delivery.
- **System Stability & Performance:** Improved product stability and performance by debugging complex software defects with C++ and GDB, and implementing performance enhancements like library upgrades.
- **Escalation Engineering:** Resolved critical customer issues by delivering timely hot-fixes and configuration changes, and revamping development environments to address user feedback.
- **Automation & Tooling:** Developed custom utilities in Python, Shell, and Ruby to streamline test data creation, simulate production environments, and simplify debugging.
- **Quality Assurance:** Built automated testing frameworks to proactively detect and resolve functional and security vulnerabilities, significantly improving overall software quality.
- **Build & Release Engineering:** Streamlined the build process with custom Makefiles and shell scripts to expedite the time-to-market for new firmware releases

**CISCO**  
**2021 JUN**



**SOFTWARE ENGINEER**  
**UMBRELLA INTELLIGENT PROXY (WEB GATEWAY) – RESEARCH & DEVELOPMENT**

As a Software Engineer for Cisco Umbrella Intelligent Proxy, I contributed to developing and deploying a robust security solution by integrating services across multiple components. I focused on optimizing infrastructure, automating workflows, and ensuring seamless global accessibility across 23 data centres. My work involved writing and containerizing code, configuring CI/CD pipelines, and implementing monitoring solutions to maintain system reliability and compliance.

**KEY HIGHLIGHTS**

- **Cloud Service Development:** Engineered and containerized microservices in C++, Python, and Go for seamless deployment in a cloud-native environment.
- **Compliance & Integration:** Integrated service code across diverse systems, ensuring strict adherence to SOC2 and FedRAMP compliance standards.
- **CI/CD Automation:** Architected and configured Jenkins pipelines from the ground up, automating builds and deployments to significantly improve development efficiency
- **Infrastructure Performance:** Established comprehensive monitoring solutions and designed custom load testing frameworks to assess and enhance infrastructure performance.
- **High Availability Operations:** Guaranteed high availability by managing on-call responsibilities across 23 global data centres, consistently exceeding service level expectations
- **Infrastructure Optimization:** Optimized infrastructure for greater efficiency and reduced complexity by identifying and eliminating redundant service functionalities
- **Automated Quality Assurance:** Implemented automated end-to-end testing to ensure service reliability and support seamless transitions to dedicated customer environments.

**EXPERIENCE SUMMARY**

**RSA SECURITY**  
**3 YEARS 10 MONTHS**

**CISCO SYSTEMS**  
**3 YEARS 9 MONTHS\***

**BARRACUDA NETWORKS**  
**5 MONTHS**

\* the current organization and mentioned duration is on September 2025

RSA SECURITY  
2019 APR



SOFTWARE ENGINEER (1 – 2)  
NETWITNESS XDR

As a Software Engineer at RSA NetWitness, I developed high-performance features in C++, capable of processing 30,000 events per second. My role involved automating debugging processes, resolving customer escalations with hot fixes, and enhancing system reliability. I collaborated with cross-functional teams in a DevOps environment, ensuring seamless feature integration and iterative performance improvements.

KEY HIGHLIGHTS

- **High-Performance Feature Development:** Engineered core C++ features for real-time threat detection, achieving optimal performance capable of processing 30,000 events per second (EPS).
- **Automation & Efficiency:** Automated debugging and data collection tools, which significantly reduced analysis time and improved troubleshooting efficiency.
- **Customer Escalation Management:** Delivered critical hot-fixes to resolve high-priority customer escalations, addressing complex issues beyond the scope of standard technical support.
- **Quality & Reliability Engineering:** Conducted rigorous functional, performance, and reliability testing to ensure product quality met stringent standards.
- **DevOps Collaboration:** Collaborated within a DevOps environment to facilitate continuous deployment and enhance overall system stability and performance.
- **Database Tooling:** Designed and implemented database-related utilities that improved system reliability and resolved persistent database challenges

2018 AUG



SOFTWARE QUALITY ENGINEER 1  
NETWITNESS XDR

As a Software Quality Engineer at RSA NetWitness, I focused on ensuring high-quality software releases by creating automated test cases and developing custom tools to streamline testing processes. My contributions included driving test automation, leading defect resolution with development teams, and improving resource management efficiency through innovative tooling.

KEY HIGHLIGHTS:

- **Test Case Automation:** Developed and automated comprehensive test cases to ensure thorough validation of new features and prevent regression defects.
- **Significant Process Improvement:** Pioneered an automation tool that reduced the product suite installation time from over 6 hours to just 28 minutes using JSON-based configuration.
- **Custom Tool Development:** Built Python and Ruby tools for test data generation and resource management, enhancing efficiency for both development and QE teams.
- **End-to-End Test Automation:** Streamlined the entire testing workflow by creating tools to automate build downloading, installation, and test execution.
- **Defect Management:** Conducted rigorous testing to identify and triage defects, collaborating closely with development teams to ensure prompt resolution.
- **Agile Process Contribution:** Actively participated in sprint meetings to define testing requirements for new features and was responsible for approving builds for release.

NOTE: STARTED AS INTERN IN RSA ON JULY 2017 AND WORKED FULL-TIME TILL JULY 2018 (FOR 13 MONTHS DURATION). BASED ON PERFORMANCE, GOT FULL-TIME POSITION IN THE SAME ORGANIZATION AND SAME TEAM.

ACADEMICS

M. TECH 2016-18	9.40# SILVER MEDALIST	MASTER OF TECHNOLOGY (M. TECH) - EMBEDDED SYSTEMS AMRITA UNIVERSITY, AMRITA SCHOOL OF ENGINEERING
B. E 2012-16	8.01#	BACHELOR OF ENGINEERING - ELECTRONICS AND COMMUNICATION ENGINEERING TAMILNADU COLLEGE OF ENGINEERING, ANNA UNIVERSITY

# The mentioned numbers are the CGPA for corresponding degree and the maximum CGPA is 10.00 for every degree

PERSONAL DETAILS

REPUBLIC OF INDIA NATIONALITY	ENGLISH, TAMIL, HINDI, KANNADA KNOWN LANGUAGES	WILLING TO, & CAN RELOCATE. RELOCATION?	AVAILABLE & VALID PASSPORT [INDIA]
CITIZENSHIP: INDIA WORK PERMIT	ENGLISH, TAMIL FLUENT LANGUAGES	11-04-1995 / 30Y DATE OF BIRTH	MANIKANDAN RAMANATHAN FULL LEGAL NAME

This resume has been carefully updated to reflect the most recent roles, responsibilities, and accomplishments as of September 2025