

THOMAS LOUIS

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SUMMARY

Principal Quality Engineer with **14+ years** of expertise in test leadership, full stack test automation, performance engineering, and DevOps-driven quality assurance practices for enterprise systems. Proven leader in designing scalable test frameworks (Selenium, Appium, RestAssured) and optimizing CI/CD pipelines (Azure DevOps, Jenkins, GitHub Actions) to achieve **90%+ automation coverage, 75%+ defect reduction, and 50% faster deployments**. Specialized in cloud-native testing (AWS, Azure, Kubernetes) and event-driven architectures (Kafka). Award-winning innovator (ING CEO Award, Capgemini Excellence) adept at mentoring teams and embedding quality across SDLC. Holder of Udacity Nanodegrees in **Cloud DevOps** and **AI Programming**.

EXPERIENCE

Career Break

Family Support & Parental Responsibilities

July 2022 - Present, India & Australia

- Planned career break to provide full-time support for a family member's medical care and later to support my wife and newborn following the birth of our child in February 2025. Completed self-paced certifications in **AI Programming** and **Cloud DevOps** to stay technically current and upskill in trending technologies. Currently pursuing **Certificate IV in Cyber Security**.

Senior Consultant - Test Automation

ASX via Ampion

August 2021 - June 2022, Sydney, AU

- Validated data integrity across **Kafka-based pipelines**, improving trade data accuracy by **95%** and reducing processing latency by **40%** through comprehensive integration and regression testing.
- Designed and maintained **functional, integration, and performance test suites**, achieving **99% test coverage** and reducing defect leakage by **75%** across mission-critical systems.
- Managed and optimized **CI/CD pipelines** with GoCD and other tools, increasing deployment speed by **50%** and cutting integration failures by **30%** through automated quality gates.
- Verified real-time streaming reliability at scale, processing over **1 million Kafka events/sec** with **99.99% uptime**, ensuring robust validation of distributed systems.
- Deployed and tested containerized applications using **Docker** and **Kubernetes**, increasing test environment efficiency and reducing infrastructure costs by **25%**.
- Developed a **Spring Boot-based REST load generator**, simulating up to **10,000 concurrent users** to support system stress testing and performance benchmarking.
- Conducted in-depth performance testing with **Gatling**, identifying bottlenecks and increasing system throughput by **70%** through proactive load analysis.
- Streamlined end-to-end CI/CD workflows using **GoCD**, reducing release cycles from **weeks to days**, enabling faster feedback loops and improved release quality.

Senior Software Engineer in Test

ING Australia

May 2017 - August 2021, Sydney, AU

- **Recognized with multiple awards at ING**, including the **CEO Award** and **Secure Code Warrior tournament win**, for exemplifying ING's *Orange Code* values and delivering high-impact innovations.
- **Built a complete automation framework** using **Puppeteer** and **Node.js**, reducing end-to-end workflow testing time by **60%** for **Mortgages, Personal Loans, and Credit Cards**.
- **Developed a Dockerized mock service** using **Spring Boot**, improving test efficiency by **35%** while enabling faster integration across microservices environments.
- **Engineered a Kafka automation framework** for producers and consumers, improving message reliability by **75%**, boosting fraud engine transaction throughput by **50%**, and enhancing real-time streaming performance at scale.
- **Executed UI automation** on **TFS/Azure** with **Selenium**, achieving **90% test coverage** and reducing manual QA effort by **75%** across multiple banking products.

- **Leveraged AppliTools for visual regression testing**, significantly reducing UI defects in production and elevating the customer experience.
- **Designed and maintained robust API automation frameworks** using **RestAssured**, **SoapUI**, and **Groovy**, improving API test coverage by **50%** and accelerating integration testing cycles.
- **Delivered scalable mobile test automation** using **Appium** and **Perfecto**, increasing mobile app test coverage by **80%** while ensuring consistent behavior across platforms and devices.
- **Led the successful rollout of Apple Pay provisioning** for ING customers, contributing to a **25% increase in digital banking adoption** and enhancing mobile user engagement.

Senior Automation Engineer

Axe Group

February 2016 - May 2017, Sydney, AU

- **Built and maintained a Cucumber-Selenium automation suite** covering **95% of smoke and regression tests** across insurance and claims systems, reducing manual test effort by **40%** and increasing test reliability.
- **Managed complex test environments**, resolving an average of **5 daily build/deployment issues** with **98% efficiency**, while running **SoapUI regression suites** to ensure **99.9% uptime** and seamless integration between AXE platforms and client systems.
- **Led system testing across multiple releases**, including planning, execution, and defect reporting — achieving **100% test coverage for new features** and reducing bug resolution time by **30%** through proactive triage and root cause analysis.
- **Collaborated closely with stakeholders and cross-functional teams**, providing actionable daily updates and quality metrics that led to **15% faster project delivery**, **20% quicker issue resolution**, and an **80% reduction in release defects**.
- **Tracked and analyzed test metrics** to drive continuous improvement, increasing coverage by **25%** and improving overall team productivity by **20%** through active engagement in agile ceremonies and daily stand-ups.

Software Engineer in Test

Barclays Bank

February 2012 - December 2015, Pune, India

- **Authored award-winning white paper** on *“Performance and Functional Testing of Web Services using Apache JMeter”*, winning an **iPhone** in a company-wide innovation contest.
- **Spearheaded QA efforts for RSA Adaptive Authentication (AA) Multifactor and Google NFC Wallet**, reducing testing cycle time by **30%** and accelerating delivery across critical security initiatives.
- **Designed and maintained a Cucumber-JVM + Selenium automation suite**, automating **80% of regression test cases** for enterprise projects like **Tsys TS2 Messaging Upgrade**, increasing test efficiency by **25%**.
- **Led end-to-end API testing for WSO2 ESB implementation and Monolith-to-SOA migration**, validating both REST and SOAP interfaces and reducing API response issues by **20%** through comprehensive test strategies.
- **Optimized performance testing for Google NFC Wallet using Apache JMeter**, improving system throughput and raising concurrent user capacity by **30%** under load.
- **Mentored a team of 6 engineers**, boosting productivity by **15%** through structured coaching on automation frameworks, performance tooling, and QA best practices.

Associate Consultant

Capgemini

October 2008 - February 2012, Pune, India

- **Awarded the Capgemini FSGBU Excellence & Innovation Award and Delivery Excellence Award** for outstanding contributions to quality engineering and project delivery.
 - Recognized with **multiple Star Awards** for consistently delivering high-quality software products on time and exceeding stakeholder expectations.
 - **Led end-to-end test management for over 15 bank card and 100+ retail card sites**, achieving **100% on-time delivery** and strict adherence to quality standards.
 - **Built a custom automation framework using HP QuickTest Pro (QTP v11)** that reduced manual testing effort by **40%**, accelerating test cycles across multiple SDLC phases.
 - **Managed multi-phase UAT testing**, successfully coordinating between offshore and onsite teams, resulting in **zero delays** across five release phases.
 - **Designed and executed 3,000+ test cases**, uncovering critical UAT defects early and reducing post-release defects by **20%**, directly improving customer satisfaction and product reliability.
 - **Conducted accessibility testing using JAWS screen reader**, ensuring **100% ADA compliance** with **W3C accessibility standards** for HTML, CSS, and UI components.
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EDUCATION

Electronics and Communications Engineering

Cochin University of Science and Technology

CERTIFICATIONS

Certificate IV in Cyber Security (in progress)

TAFE DIGITAL • 2025

- Monitoring and assessing **cyber attack vectors** to evaluate organizational exposure to external and internal threats.
- Identifying and applying appropriate **security tools and frameworks** (e.g., IDS/IPS, firewalls, SIEM) to mitigate breaches and enhance response readiness.
- Detecting and analyzing **network- and system-level intrusions**, with hands-on exposure to threat signatures, anomaly detection, and log analysis.
- Developing and implementing controls to minimize **network and endpoint vulnerabilities**, aligned with **zero-trust architecture** and **least-privilege principles**.
- Studying techniques to defend against **insider threats**, including behavioral analysis and role-based access control enforcement.

Certificate Of Nanodegree Program - Cloud DevOps Engineer

UDACITY • 2024

- Deployed static and dynamic applications on **AWS** using core services like **EC2, S3, RDS, VPC, IAM, SNS**, and **EKS**, gaining expertise in AWS CLI, networking, and cloud deployment models.
- Implemented **Infrastructure as Code (IaC)** using **AWS CloudFormation**, translating business requirements into architecture diagrams and provisioning secure, scalable, high-availability environments.
- Containerized applications using **Docker**, pushed images to **Amazon ECR**, and orchestrated deployments using **Kubernetes** with **Helm charts**, services, and autoscaling policies in production-grade AWS clusters.
- Built end-to-end **CI/CD pipelines** with **GitHub Actions** and **CircleCI**, automating build, test, and deployment workflows for frontend (ReactJS) and backend (Python/Flask) applications.
- Managed centralized logging and monitoring using **Amazon CloudWatch** and **Prometheus**, and configured alerts for Kubernetes workloads using **Ansible**-based automation.
- Developed and deployed multiple full-stack cloud-native applications using **Flask, ReactJS, NGINX**, and **Firestore**, hosted on AWS and provisioned via Ansible playbooks.
- Delivered production deployments for projects including: **1.** Static Website Hosting on AWS **2.** High-Availability Full-Stack App with CloudFormation **3.** Microservice Operationalization with Kubernetes **4.** CI/CD Automation with GitHub Actions and CircleCI **5.** Full-stack deployment with Ansible + CircleCI workflows
- Designed and deployed a **Cryptocurrency Price Tracker** with **Flask**, containerized and integrated into CI/CD pipelines.
- Built a **Pet Marketplace Web App** using **React** (frontend) and **Python** (backend), deployed to AWS via **Docker, CloudFormation**, and **Ansible**, fully integrated with CircleCI .
- Created a **Purchasing Power Parity Calculator** using **ReactJS, Flask, Firestore**, and **NGINX**, automated deployment to EC2 with Ansible.
- AWS Cloud Fundamentals: Cloud autoscaling, VPC, Amazon RDS, Cloud load balancing, EC2, IAM, SNS, S3, AWS CLI, Elastic Beanstalk, CloudFormation, Lambda, DynamoDB
- Deploy Infrastructure as Code (IaC): AWS networking, CloudFormation, Cloud security, VPC, S3, Cloud load balancing

Certificate Of Nanodegree Program - AI Programming with Python

UDACITY • 2023

- Developed and trained deep neural networks using **PyTorch**, implementing gradient descent, backpropagation, error functions, and hyperparameter tuning for network optimization.
- Built Transformer neural networks from scratch, including tokenization, embeddings, multi-head attention, and sequence modeling; fine-tuned pre-trained Transformers for NLP tasks like text generation and question answering.
- Created end-to-end image classification systems, including a **dog breed classifier** using pre-trained CNNs and a custom classifier deployed via CLI interface.
- Applied advanced mathematical concepts including **linear algebra** (matrix ops, transformations, combinations), **calculus** (derivatives, chain rule, gradient descent), and **statistical analysis** to optimize neural networks.
- Engineered scalable AI workflows using **object-oriented Python**, functional programming constructs (lambdas, generators, iterators), and robust modular code with clear documentation.

- Performed comprehensive data analysis and visualization using **NumPy**, **Pandas**, **Matplotlib**, and **Seaborn**, with a focus on multivariate datasets and statistical insights.
- Implemented machine learning algorithms from scratch: **Linear/Logistic Regression**, **Decision Trees**, **Naive Bayes**, **SVM**, and **Ensemble Methods** (Bagging/Boosting), with performance tuning.
- Completed capstone project building an image classifier for flower detection using a full ML pipeline: data preprocessing, model training, evaluation, and deployment .
- Built production-ready ML environments using **Anaconda**, **Jupyter Notebooks**, and CLI tools to enable reproducible pipelines and collaborative development.

Online Learning

Pluralsight

- Java EE 7 Fundamentals, Java 11 Fundamentals: Collections, Plotting Data with Pandas, Foundations of PyTorch, Expediting Deep Learning with Transfer Learning: PyTorch Playbook.

Other Professional Certifications

- ISTQB Certified Foundation Level Tester
- Lean competency - LCS level 1a
- Six Sigma Yellow Belt certification
- ITIL foundation

SKILLS

Programming Languages:Java, Python, JavaScript, Shell Scripting, Groovy, PowerShell

Cloud Platforms & Infrastructure:AWS (EC2, S3, RDS, IAM, Lambda, CloudFormation, EKS, SNS), Microsoft Azure, Rackspace OpenStack

Infrastructure as Code & Automation:Ansible, Terraform, AWS CloudFormation

CI/CD & DevOps Tooling:GitHub Actions, CircleCI, GoCD, Jenkins, Azure DevOps (TFS)

Containerization & Orchestration:Docker, Kubernetes (EKS), Amazon ECR, Helm

UI Test Automation:Selenium WebDriver (Java/TestNG), Appium, Puppeteer (Node.js)

API & Microservices Testing:RestAssured, Postman, SoapUI, Karate, Java HTTP Client

BDD & Test Frameworks:Cucumber, SpecFlow, TestNG, JUnit, Mockito

Performance & Load Testing:Apache JMeter, Gatling (Scala)

Security Testing:Kali Linux, Metasploit

Monitoring & Logging:Amazon CloudWatch, ELK Stack, Splunk

Databases & Data Stores:PostgreSQL, Oracle, Microsoft SQL Server

Version Control & Build Tools:Git, Maven, Gradle

IDE & Developer Tools:IntelliJ IDEA, Visual Studio, VS Code, Jupyter Notebooks

Event-Driven Architectures:Kafka

Agile Project Management:Jira, Rally, Azure DevOps (Boards)

Accessibility & Visual Testing:JAWS, AppliTools

Application Servers:Apache Tomcat, Oracle WebLogic, RedHat JBoss EAP

Code Quality Tools:SonarQube

Core Banking Systems: Bancs, VisionPlus, TSYS TS2
