

The IT Talent Landscape

2026 – 2030

The 11 most critical IT profiles of the next five years
Market analysis, growth forecasts, and strategic recommendations

+163%

AI/ML job growth USA 2024-2026

4m

Global cybersecurity talent gap

250,000

New quantum jobs by 2030

89 days

Avg. time-to-fill AI/ML roles

ROLE PROFILES IN THIS REPORT

#	Role Title	Category	Demand
01	AI/ML Engineer & LLM Specialist	Applied AI & Model Development	Business Critical
02	AI Agent & Agentic AI Developer	Autonomous Systems & Workflow Automation	Business Critical
03	Cybersecurity Engineer / Cloud Security Specialist	Risk, Security & Compliance	Business Critical
04	MLOps / LLMOps Engineer	Model Operations & AI Infrastructure	Very High Demand
05	Cloud Engineer / Cloud Architect (Multi-Cloud)	Infrastructure & Platform Engineering	Strategic Priority
06	Data Engineer	Data Infrastructure & Analytics Platforms	Very High Demand
07	AI Product Manager	Product Strategy & AI Management	Highly Strategic
08	DevSecOps Engineer	Development, Security & Operations	Strong Growth
09	Quantum Computing Engineer	Emerging Technologies & Deep Tech	Strategically Emerging
10	AI Compliance & Risk Manager	AI Governance & Regulation	Structurally Essential
11	Edge Computing Engineer	Distributed Systems & IoT Infrastructure	Highly Strategic

The Most In-Demand IT Profiles 2026 – 2030

The global IT labour market is facing a structural transformation. Generative AI, regulatory maturation, cloud ubiquity, and the commercialisation of quantum computing are simultaneously creating massive demand surges and unprecedented talent shortages. This report identifies 11 IT profiles with the greatest structural need through 2030, providing the strategic foundation for evidence-based hiring decisions.

THREE STRATEGIC IMPERATIVES FOR HR LEADERS

01 Act immediately on core AI roles	AI/ML Engineers, Agentic AI Developers, and MLOps Engineers are already extremely scarce. Organisations that delay recruitment by 12-18 months will face a structural disadvantage.
02 Security as strategic investment	Cybersecurity and DevSecOps roles are non-negotiable regulatory requirements (EU AI Act, NIS2, DORA) and a source of competitive differentiation simultaneously.
03 Build quantum pipeline early	Quantum talent is still accessible today. Organisations that invest now will secure advantages ahead of an expected exponential demand surge from 2028 onwards.

ROLE 01

AI/ML Engineer & LLM Specialist

Building the algorithms that power the enterprise of tomorrow

APPLIED AI & MODEL DEVELOPMENT

EXECUTIVE SUMMARY

AI/ML Engineers are the architects behind the algorithms driving chatbots, recommendation engines, and autonomous systems. They design models, train neural networks, and refine algorithms for automation and predictive insights. With the explosive demand for generative AI, their role has expanded to include LLM fine-tuning, RAG systems, and inference optimisation.

MARKET CONTEXT	STRATEGIC VALUE
AI, ML, and data science job postings grew by 163% in 2026 (Robert Half). Over 80% of enterprises will have integrated AI into core processes by 2026 (Gartner). Average time-to-fill for AI/ML roles is 89 days - the longest of any IT position.	Organisations with strong AI/ML capabilities achieve 20-40% higher operational efficiency. Fine-tuned LLMs reduce support costs by up to 60%. Proprietary AI models create a strategic competitive advantage that is nearly impossible to replicate.

KEY RESPONSIBILITIES

Area	Description
Model Development	Training and developing ML models (NLP, Computer Vision, Recommender Systems); fine-tuning foundation models for enterprise use cases.
RAG & LLM Systems	Designing Retrieval-Augmented Generation pipelines; optimising context windows and token efficiency for production LLMs.
MLOps & Deployment	Model versioning, A/B testing, performance monitoring and drift detection in production environments.
Evaluation & Quality	Designing evaluation suites; measuring accuracy, hallucination rates, fairness, and model safety.
Stakeholder Communication	Translating technical model outputs into business implications; collaborating with Product and Data teams.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
Python & ML Frameworks	Expert-level PyTorch/TensorFlow; Hugging Face, LangChain, LlamaIndex; MLflow for experiment tracking.
LLM Expertise	Hands-on experience with GPT-4, Claude, Gemini APIs; RLHF, LoRA/QLoRA fine-tuning; quantised models.
Mathematical Foundations	Linear algebra, probability theory, and optimisation algorithms at graduate level.
Cloud Infrastructure	GPU cluster management on AWS/Azure/GCP; SageMaker, Vertex AI, Azure ML.
Research Proficiency	Ability to read, evaluate, and implement current academic papers; open-source contributions a plus.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 02

AI Agent & Agentic AI Developer

Building the autonomous digital workforce for the enterprise

AUTONOMOUS SYSTEMS & WORKFLOW AUTOMATION

EXECUTIVE SUMMARY

AI Agent Developers build autonomous software systems that perceive context, plan multi-step actions, and execute complex tasks with minimal human involvement. As AI shifts from tool to actor, this is one of the most strategically significant engineering roles of the decade.

MARKET CONTEXT	STRATEGIC VALUE
The AI agent platform market will exceed USD 47bn by 2030. 65% of enterprises now regularly use generative AI - up from 33% the previous year (McKinsey 2024). Agentic AI is expected to become the dominant enterprise AI paradigm by 2027.	Early adopters report 3-5x throughput gains on knowledge-intensive tasks. Proprietary agentic architectures create strategic moats that are extremely difficult for competitors to replicate.

KEY RESPONSIBILITIES

Area	Description
Agent Architecture	Designing multi-agent systems using LangGraph, AutoGen, or CrewAI; communication protocols, memory layers, and tool-use boundaries.
LLM Integration	Integrating frontier models via API; RAG pipelines; evaluating fine-tuning vs. in-context prompting for specific agent tasks.
Tool Engineering	Building custom tool sets for ERP, CRM, and database interaction; sandboxing and permission boundaries.
Red-Teaming & Evaluation	Adversarial testing for agent reliability, hallucination rates, and task completion before production deployment.
Production Operations	Observability stacks; escalation logic; human-oversight checkpoints in critical decision workflows.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
Advanced Python	Senior-level Python; asynchronous programming, type systems, distributed system patterns.
Agentic Frameworks	Proficiency with LangChain, LangGraph, AutoGen, CrewAI; situational framework selection.
Software Architecture	Microservices, event-driven systems; vector databases (Pinecone, Weaviate, pgvector).
AI Safety & Ethics	Alignment principles, bias mitigation strategies, responsible AI deployment.
LLM Systems Knowledge	Deep understanding of context windows, token economics, model-specific behaviour.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 03

Cybersecurity Engineer / Cloud Security Specialist

Protecting digital assets in an era of exponential threat complexity

RISK, SECURITY & COMPLIANCE

EXECUTIVE SUMMARY

Cybersecurity Engineers have evolved from an IT back-office function to a board-level strategic priority. A single incident costs an average of USD 4.88m (IBM 2024). NIS2, DORA, and Swiss ISG create non-negotiable regulatory pressure across all industries.

MARKET CONTEXT	STRATEGIC VALUE
Security roles grew by +124% in the US in 2026 (Robert Half). The global cybersecurity talent gap stands at 4 million specialists. Switzerland alone faces a shortage of over 40,000 qualified professionals.	Organisations with mature security programmes recover 3x faster at 40% lower cost. Proactive security prevents 74% of potential attacks. Every CHF invested in prevention yields CHF 4.20 in avoided damages.

KEY RESPONSIBILITIES

Area	Description
Threat Detection & Monitoring	Operating and optimising SIEM/SOAR platforms (Splunk, Sentinel); threat hunting; executive-level threat reports.
Vulnerability Management	Structured assessment programmes; prioritisation by criticality and exploitability; patch SLA monitoring.
Incident Response	Containment, eradication, and recovery; forensic post-incident analysis; regulatory breach notifications.
Cloud Security & Architecture	Zero-trust principles; CSPM; container security; security review of new cloud architectures.
Compliance & Reporting	ISO 27001, NIST, DORA, NIS2, Swiss ISG mapping; risk reports for CISO and board.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
Threat Detection	Splunk, Microsoft Sentinel; incident response playbooks; digital forensics.
Offensive Security	Penetration testing (PTES, OWASP); red team experience; OSCP or CEH strongly preferred.
Cloud Security	AWS/Azure/GCP security controls; CSPM; container and Kubernetes security.
Regulatory Knowledge	GDPR, NIS2, DORA, ISO 27001, Swiss ISG; certification process experience.
Risk Communication	Translating cyber risk into financial metrics; presenting to non-technical executives.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 04

MLOps / LLMOps Engineer

Taking AI models to production reliably and at scale

MODEL OPERATIONS & AI INFRASTRUCTURE

EXECUTIVE SUMMARY

MLOps Engineers bridge data science and operations to run ML models reproducibly and at scale in production. With the proliferation of LLMs, the discipline has expanded into LLMOps, addressing prompt versioning, hallucination monitoring, and inference cost optimisation.

MARKET CONTEXT	STRATEGIC VALUE
The global MLOps market will reach USD 13bn by 2030 (MarketsandMarkets). Enterprises ran an average of 14 parallel AI workflows in 2024 (OpenAI). Demand exceeds supply by a factor of 3.	MLOps programmes reduce model deployment time by 70% and measurably increase production reliability. LLMOps optimisation cuts inference costs by 35-50% while improving output quality.

KEY RESPONSIBILITIES

Area	Description
Pipeline Engineering	Reproducible ML training and inference pipelines; versioning of data, code, and models; feature stores.
Model Deployment	Containerising ML workloads; canary releases, blue-green deployments; latency optimisation.
Monitoring & Drift	Model monitoring stacks; data drift and concept drift detection; automated retraining triggers.
LLMOps	Prompt versioning; hallucination monitoring; cost-per-token optimisation; LLM output evaluation in production.
FinOps for AI	GPU cluster management; rightsizing for inference workloads; unit economics reporting to CFO.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
MLOps Platforms	MLflow, Kubeflow, SageMaker, Vertex AI, Azure ML; CI/CD for ML pipelines.
Containerisation	Docker, Kubernetes (EKS/AKS/GKE); Argo Workflows; Helm charts for ML deployments.
Python & Distributed Computing	PyTorch/TensorFlow; Ray, Dask for distributed training; Triton Inference Server.
LLM Tooling	LangSmith, PromptFlow, Weights & Biases; GGUF/ONNX model formats.
Observability	Prometheus, Grafana; custom metrics for ML systems; alerting strategy design.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 05

Cloud Engineer / Cloud Architect (Multi-Cloud)

Building scalable, resilient infrastructure for the AI economy

INFRASTRUCTURE & PLATFORM ENGINEERING

EXECUTIVE SUMMARY

Cloud Engineers are the invisible architects of the modern enterprise. As virtually every AI and analytics capability is delivered through cloud-native platforms, these professionals determine whether organisations innovate at AI speed or are constrained by legacy infrastructure.

MARKET CONTEXT

Global cloud infrastructure spending exceeded USD 270bn in 2024, growing 21% p.a. (Synergy Research). Cloud computing posted the strongest job growth of any classic IT segment in 2026 at +17.9%. 78% of Swiss companies plan to migrate over 50% of workloads within 24 months.

STRATEGIC VALUE

Mature cloud infrastructure delivers 20-40% TCO reduction vs. on-premise at 3-5x faster deployment cycles. Cloud-native platforms reduce infrastructure-related downtime by 60-80%.

KEY RESPONSIBILITIES

Area	Description
Architecture Design	Highly available multi-cloud architectures; Architecture Decision Records; Well-Architected Framework reviews.
Infrastructure as Code	Terraform, Pulumi, AWS CDK; GitOps principles; infrastructure change governance.
Platform Engineering	Internal developer platforms (IDPs); large-scale Kubernetes orchestration (EKS/AKS/GKE).
FinOps & Cost Control	Continuous cloud cost monitoring; rightsizing; reserved capacity; unit economics reporting.
Site Reliability Engineering	SLA/SLO/SLI definition; chaos engineering; automated remediation pipelines.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
Multi-Cloud Expertise	Advanced proficiency on AWS, Azure, or GCP; professional-level certifications preferred.
Infrastructure as Code	Expert-level Terraform; GitOps discipline; Pulumi or CloudFormation.
Containers & Kubernetes	Production experience with EKS/AKS/GKE; Helm, Argo CD, Istio service mesh.
Observability	Datadog, Grafana, Prometheus, OpenTelemetry; alerting strategy design.
Security & Compliance	CSPM, Secrets Management (Vault), Compliance-as-Code.

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ROLE 06

Data Engineer

Building the foundation for data-driven decisions and AI systems

DATA INFRASTRUCTURE & ANALYTICS PLATFORMS

EXECUTIVE SUMMARY

Data Engineers build, design, and maintain the pipelines, storage systems, and transformation layers that every AI and analytics initiative depends on. Without solid data foundations, even the best AI models remain ineffective.

MARKET CONTEXT	STRATEGIC VALUE
Job growth for Data Engineers is forecast at +35% through 2030 (BLS). With the proliferation of AI systems requiring high-quality training data, the role is structurally indispensable. 89% of technology leaders report difficulty finding suitable candidates.	Organisations with mature data platforms achieve 4x faster analytics cycles and reduce data engineering work for data scientists by 60-70%. Clean, well-governed data is a direct prerequisite for regulatory-compliant AI deployment.

KEY RESPONSIBILITIES

Area	Description
Pipeline Engineering	Design, development, and maintenance of batch and streaming pipelines; ETL/ELT processes with Spark, Flink, or dbt.
Data Platform Architecture	Data lakes, warehouses, and lakehouse architectures (Delta Lake, Iceberg); cloud data platforms.
Data Quality & Governance	Data quality checks, data lineage, metadata management; enforcing governance policies.
Real-Time Processing	Streaming architectures with Kafka, Kinesis; near-real-time analytics and latency optimisation.
Data Modelling	Dimensional modelling; semantic layers; feature stores for ML pipelines.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
SQL & Python	Expert-level SQL; Python (pandas, PySpark); Airflow or Prefect for orchestration.
Cloud Data Platforms	Snowflake, BigQuery, Azure Synapse; AWS Glue, Databricks; modern ELT tooling (dbt).
Streaming Technologies	Apache Kafka, Spark Streaming, or Flink; near-real-time pipeline design.
Data Modelling	Kimball and Inmon methodologies; semantic layers; Data Vault 2.0.
Data Governance	Catalogue tools (Alation, Collibra); data lineage; regulatory requirements (GDPR).

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ROLE 07

AI Product Manager

Orchestrating AI product strategy at the intersection of technology and value creation

PRODUCT STRATEGY & AI MANAGEMENT

EXECUTIVE SUMMARY

The AI Product Manager holds one of the most strategically complex roles in modern organisations. Beyond classic PM skills, the role demands competency in probabilistic systems, model behaviour, ethical AI deployment, and organisational change - always anchored in customer value.

MARKET CONTEXT	STRATEGIC VALUE
LinkedIn 2024 ranks the AI PM among the five fastest-growing roles globally. 84% of companies are running active AI initiatives (PwC 2024). Compensation has converged with engineering leadership levels. Demand exceeds supply by a factor of 3.	Well-managed AI products achieve 20-35% revenue premiums vs. traditional software. Poorly managed deployments create disproportionate reputational and regulatory risks.

KEY RESPONSIBILITIES

Area	Description
Vision & Strategy	AI product vision, roadmap, and business case; alignment with corporate strategy; securing executive sponsorship.
Cross-Functional Leadership	Matrix teams of data scientists, engineers, legal/compliance; resolving technical and organisational trade-offs.
AI Model Governance	Defining acceptable model performance thresholds; bias testing; fairness frameworks; staged rollout protocols.
Market Intelligence	Jobs-to-be-done; qualitative and quantitative research into AI product-market fit; willingness to pay.
Stakeholder Management	Presenting product performance to board and executive team; managing expectations of investors and regulators.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
AI/ML Conceptual Fluency	Deep understanding of ML model types without necessarily coding; ability to challenge engineering assumptions.
Product Strategy	Jobs-to-be-done, OKRs, Kano model; platform and ecosystem product thinking.
Data-Driven Decisions	Experiment design; statistical significance; analytics for feature prioritisation.
Responsible AI	EU AI Act; AI ethics frameworks; organisational AI governance best practices.
Commercial Leadership	P&L responsibility; financial modelling for AI investments; pricing strategy.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 08

DevSecOps Engineer

Embedding security as code into every step of the development lifecycle

DEVELOPMENT, SECURITY & OPERATIONS

EXECUTIVE SUMMARY

DevSecOps Engineers integrate security practices directly into the software development lifecycle - from the first line of code to production operations. Rather than treating security as an afterthought, they embed it as an automated, continuous process.

MARKET CONTEXT	STRATEGIC VALUE
The global DevSecOps market will reach USD 23.3bn by 2030 (CAGR 24.1%). Software development jobs grew 10.4% in 2026. Security and DevOps expertise are now inseparable.	Organisations with mature DevSecOps programmes discover vulnerabilities 5x earlier at 60% lower cost. Automated security pipelines reduce manual security testing by 80%.

KEY RESPONSIBILITIES

Area	Description
Security Pipeline	Integrating SAST, DAST, SCA into CI/CD; automated security checks on every commit.
Infrastructure Security	Security hardening of cloud infrastructure; IaC scanning; container image security; secrets management.
Compliance Automation	Policy-as-Code (OPA, Kyverno); automated checks for GDPR, ISO 27001, SOC2.
Incident Response	Security incident response in DevOps context; playbook automation; blameless post-mortem culture.
Security Education	Developer security training; threat modelling in design phases; Security Champion programmes.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
CI/CD & Security Tools	Jenkins, GitLab CI, GitHub Actions; SAST/DAST (Snyk, SonarQube, OWASP ZAP).
Container Security	Docker scanning; Kubernetes RBAC; admission controllers; Falco runtime security.
Cloud Security	AWS Security Hub, Azure Security Center; Terraform security scanning (Checkov, tfsec).
Scripting & Automation	Python/Bash for security automation; API integration for security tooling.
Compliance Frameworks	ISO 27001, SOC2, GDPR, NIS2; policy-as-code implementations.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 09

Quantum Computing Engineer

Enabling computations that push classical computers beyond their limits

EMERGING TECHNOLOGIES & DEEP TECH

EXECUTIVE SUMMARY

Quantum Computing Engineers develop software and algorithms for quantum computers that exponentially outperform classical computers on certain problem classes. Still in early-stage commercialisation but with an explosive growth trajectory - financial institutions, pharma, and governments are investing heavily.

MARKET CONTEXT

250,000 quantum computing roles needed by 2030 (The Quantum Insider). Currently only approx. 30,000 qualified experts exist globally - a 3:1 supply-demand gap. Quantum-skills job postings tripled between 2011 and 2024 (MIT IDE).

STRATEGIC VALUE

The global quantum computing market will reach USD 65bn by 2030 (McKinsey). Quantum algorithms solve certain optimisation problems in hours rather than years. Early talent investment secures a structural competitive advantage.

KEY RESPONSIBILITIES

Area	Description
Quantum Algorithms	Designing and implementing quantum algorithms (Grover, Shor, QAOA, VQE) for business problems.
Quantum Software Engineering	Development with Qiskit, Cirq, PennyLane; quantum circuit design; simulation on emulators.
Hybrid Classical-Quantum	Integration with classical IT infrastructure; cloud quantum platforms (IBM Quantum, AWS Braket, Azure Quantum).
Error Correction	Quantum error correction; noise mitigation strategies; NISQ-era algorithm optimisation.
Applied Research	Identifying use cases with quantum advantage in finance, pharma, logistics; business case development.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
Quantum Mechanics Foundations	Superposition, entanglement, qubit manipulation; linear algebra at graduate level.
Quantum Programming	Qiskit, Cirq, or PennyLane; Python; experience with quantum circuit simulators.
Classical Computer Science	Strong algorithms and complexity theory; classical optimisation algorithms.
Cloud Quantum Platforms	IBM Quantum, AWS Braket, Azure Quantum; quantum-as-a-service experience.
Applied Mathematics	Probability theory, graph theory, optimisation mathematics for quantum algorithms.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 10

AI Compliance & Risk Manager

Ensuring responsible AI and guaranteeing regulatory conformity

AI GOVERNANCE & REGULATION

EXECUTIVE SUMMARY

With the EU AI Act (phased in from 2026) and industry-specific regulations, a new critical governance function is emerging. AI Compliance & Risk Managers ensure that AI systems are deployed in a legally compliant, ethically sound, and organisationally accountable manner.

MARKET CONTEXT	STRATEGIC VALUE
The EU AI Act threatens fines of up to EUR 35m or 7% of annual turnover. 78% of companies feel inadequately prepared for new requirements (PwC 2024). Demand for AI governance specialists is growing at 89% per year.	Proactive AI compliance prevents costly retroactive remediation. Organisations with mature governance frameworks achieve 25% faster product approvals and higher customer satisfaction.

KEY RESPONSIBILITIES

Area	Description
EU AI Act Compliance	Gap analyses; risk-class classification; technical documentation and conformity assessments.
AI Risk Assessment	Quantifying risks (bias, hallucinations, security gaps); escalation protocols; risk frameworks.
Governance Structures	Building internal AI governance; responsible use policies; bias audits and fairness testing.
Regulator Interface	Communicating with authorities; reporting obligations; coordinating audits and certifications.
Training & Culture	AI ethics training; responsible AI culture; incident response for AI malfunctions.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
EU AI Act & Regulation	EU AI Act, GDPR, DORA, sector-specific regulation; certification process experience.
AI Technology Understanding	Sufficient technical AI knowledge to assess risks - without necessarily coding.
Risk Management	Enterprise risk management; GRC frameworks; risk quantification.
Ethics & Stakeholders	Applied AI ethics; stakeholder engagement; communicating sensitive risk topics.
Project Management	Leading complex compliance projects across technical and legal teams.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

ROLE 11

Edge Computing Engineer

Bringing AI processing to the network edge - where data is born

DISTRIBUTED SYSTEMS & IOT INFRASTRUCTURE

EXECUTIVE SUMMARY

Edge Computing Engineers focus on processing data at the edge of networks to minimise latency and reduce bandwidth. With the proliferation of AI at the edge, autonomous systems, and Industry 4.0, the role is becoming the central bridge between cloud capabilities and real-world deployments.

MARKET CONTEXT	STRATEGIC VALUE
The global edge computing market grows from USD 61.1bn (2024) to USD 232.2bn by 2030 (CAGR 25.1%). IoT devices will reach 30 billion by 2030. Industrial automation and autonomous vehicles are the major growth drivers.	Edge AI reduces cloud bandwidth costs by 40-70% while cutting latency from seconds to milliseconds. Critical applications in industry and healthcare require real-time decisions without cloud dependency.

KEY RESPONSIBILITIES

Area	Description
Edge Architecture	Designing distributed edge-cloud architectures; edge hardware selection (NVIDIA Jetson, Intel OpenVINO); connectivity management.
Edge AI Deployment	Optimising ML models for edge hardware (quantisation, pruning, ONNX); TensorFlow Lite, OpenVINO, ONNX Runtime.
IoT Integration	MQTT, AMQP, OPC-UA; device management and OTA updates; security in IoT environments.
Network & Latency	5G integration; bandwidth optimisation; latency analysis and reduction in distributed systems.
Fleet Management	Centralised management of edge device fleets; remote diagnostics; automated fault correction.

COMPETENCY FRAMEWORK

Competency	Depth & Requirements
Embedded Systems	C/C++ and Python for embedded environments; cross-compilation; resource-constrained programming.
Edge AI Frameworks	TensorFlow Lite, PyTorch Mobile, ONNX Runtime, OpenVINO; model optimisation for constrained hardware.
Cloud-Edge Integration	AWS IoT Greengrass, Azure IoT Edge, Google Cloud IoT; hybrid deployment strategies.
Network Technologies	5G, Wi-Fi 6, LPWAN; network virtualisation; real-time communication protocols.
Edge Security	Secure boot; certificate management; security architecture in distributed environments.

Sources: Robert Half, WEF, McKinsey, Gartner, IDC. This report is for informational purposes only. (c) 2026 GHR Global Human Resources AG.

Data Basis of This Report

This report is based on a synthesis of current market data, job market analyses, and industry reports (as of March 2026). Growth forecasts are estimates based on published reports. Salary figures represent Swiss market averages for 2026.

Source	Content & Usage
WEF Future of Jobs Report 2026	Global employment forecasts and skills trends to 2030; survey of 1,000+ companies.
Robert Half Technology 2026-2026	US job market and salary analysis for IT professions; annual survey.
McKinsey Global AI Survey 2024	AI adoption and impact in enterprises worldwide; representative sample of global executives.
Gartner IT Trends 2026	Technology maturity curves, market potential, and strategic recommendations.
IBM Cost of a Data Breach 2024	Annual analysis of the average cost of data security incidents.
ISC2 Cybersecurity Workforce Study 2024	Global analysis of the cybersecurity talent situation and skills gaps.
The Quantum Insider / IEEE 2024-2026	Quantum job market, talent development, and industry growth forecasts to 2030.
Synergy Research Group Cloud 2024	Cloud infrastructure spending and market share analysis by hyperscaler.
LinkedIn Jobs on the Rise 2024	Analysis of the fastest-growing professions based on LinkedIn platform data.
PwC AI Predictions 2024	Enterprise readiness and AI investment trends globally and in Switzerland.

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