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**Technical Team Lead/Software Architect**

Technical Architect with extensive experience in designing, implementing and integrating complex distributed software systems.

Proven ability to design and develop solutions for data platforms, payment platforms and Business Support Systems (BSS).

Problem solving skills are complemented by experience working in cross-functional teams using Agile Methodology.

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<b>Shell Information Technology International</b>	<b>London, UK</b>
<b>Solutions Architect (Contractor) - Metagenomics Data Management Platform</b>	<b>02/2023 - 12/2023</b>

- Collaborated with stakeholders in shaping a Lakehouse solution for curation, governance and analytics of metagenomic data sets that drive various decarbonisation and green energy initiatives.
- Defined data producer and data consumer requirements, including various building block components for a Lakehouse architecture.
- Designed and documented high-level solution and cloud architectures.
- PoC implementation of end-to-end workflows and data pipelines.

**Technologies** Python, Azure Databricks, OpenAPI, RESTful HTTP, Azure, Terraform

<b>Koweg Software Solutions</b>	<b>London, UK</b>
<b>Developer/Director (Contractor) - Securities Data Analytics</b>	<b>01/2014 - present</b>

- Design and development of software solutions for analysing and visualising securities data.
- Ingestion and analysis of stock and market data for trading and portfolio optimisation.

**Technologies** Python(Pandas, Numpy, Matplotlib, Scikit-learn, FastAPI), Java 8, Kotlin, Spring Boot, RESTful HTTP, GraphQL, React, Azure, AWS(Lambda, S3, CDK, SAM), Terraform

<b>NewDay</b>	<b>London, UK</b>
<b>Software Engineer (Contractor) - GraphQL PoC</b>	<b>07/2021 - 11/2021</b>

- Designed and documented architecture solution required for transforming a RESTful BFF layer to a GraphQL integration layer.
- Implemented and evaluated performance tests on GraphQL applications that integrated downstream back-end services.

**Technologies:** Kotlin, Spring Boot, OpenAPI, GraphQL, Node.js, JMeter, BlazeMeter, GitHub Actions, Azure, Octopus Deploy

<b>Daimler</b>	<b>Stuttgart, Germany</b>
<b>Solutions Architect (Contractor) - Vehicle Order Management System Modernisation</b>	<b>02/2021 - 07/2021</b>

- Collaborated with business architects and product owners in identifying bounded contexts and business objects that were needed for defining sales, pricing and order workflows.
- Created high-level solution architecture and collaborated with dev teams in functionally decomposing legacy applications that were planned for migration to cloud-native microservices.
- Evangelised best practices for cloud-native application development and provided guidance on architecture issues to dev teams.
- Evaluated and tested workflow engine solutions with PoCs.

**Technologies:** Java, Spring Boot, OpenAPI, GraphQL, Angular, Microservices, BPMN & DMN modelling, Archimate, AWS, Terraform, Jenkins

<b>Innogy/E.ON</b>	<b>Dortmund, Germany</b>
<b>Solutions Architect (Contractor) - eMobility Platform Modernisation</b>	<b>06/2019 - 12/2019</b>

- Created solution designs that enabled deliverables for an EV charging network management platform.
- Collaborated with cross-functional teams in refining and documenting business use cases for EV charging network interoperability and charging session state management.
- Supported various teams in troubleshooting and optimising their microservice implementation in order to meet required NFRs.
- Performed architecture reviews and evangelised best practices for building cloud-native applications.

**Technologies:** Java, Kotlin, Spring Boot, SQL, RESTful HTTP, GraphQL, OpenAPI, Angular, UML, GitLab, Maven, JMeter, Gatling, MySQL, RabbitMQ, ActiveMQ, Glassfish, AppDynamics, CA API Gateway, Docker, AWS, Pivotal Cloud Foundry

<b>HSBC Holdings</b>	<b>London, UK</b>
<b>Technical Team Lead (Contractor) - Front Office Regulatory Platform</b>	<b>06/2018 - 03/2019</b>

- Collaborated with BAs in analysing various supervisory controls, reporting tools and processes that needed to be automation.
- Delivered service designs and API specifications for financial and non-financial risk control services.
- Designed integration solutions and workflows for evidencing, approving, reporting or escalating various controls such as late trades, stop-loss limit breaches and personal account dealing breaches.
- Coached and led teams in agile software development practice -TDD, BDD and peer reviews.
- Collaborated with Product Owners in refining and prioritising product backlogs.

**Technologies:** Java 8, Kotlin, Spring Boot, VertX, Activiti, SQL, RESTful HTTP, Swagger, Angular, OAuth 2, Oracle 11g, UML, Git, Maven, REST Assured, Cucumber, JMeter, WireMock, Docker, Kubernetes, Jenkins

<b>Deutsche Bank</b>	<b>Frankfurt, Germany</b>
<b>Senior API Engineer (Contractor) - Securities Order Management System Integration</b>	<b>06/2017 - 05/2018</b>

- Designed and documented business partner APIs that exposed an internal Order Management System for the execution of equity orders.
- Collaborated with SMEs in understanding MiFID II directives regarding best order execution rules and cost transparency for securities transactions.
- Implemented mock services to simulate trade execution and validate interface models.

**Technologies:** Java 8, Spring Boot, Angular, SQL, RESTful HTTP, Swagger, Cucumber, OpenID Connect, OAuth 2, Oracle 11g, UML, Git, Maven, Tomcat, REST Assured, SoapUI, WireMock

<b>HSBC Holdings</b>	<b>London, UK</b>
<b>Technical Team Lead(Contractor) - Digital Transformation Programme</b>	<b>08/2016 - 04/2017</b>

- Designed and documented APIs for various internal corporate banking services.
- Led PoCs on ForgeRock OpenAM & OpenIDM as access control and identity management solutions.
- Collaborated with SMEs in defining bounded contexts for a Letter Of Credit component in a monolithic trade services platform.
- Designed and implemented workflows for user onboarding processes that orchestrated multiple distributed services.

**Technologies:** Java, Spring Boot, SQL, RESTful HTTP, Oracle 11g, MongoDB, RAML, Jenkins, Git, Maven, IBM MQ, Pivotal Cloud Foundry(PCF), OpenAM, OpenIDM, OpenDJ, MuleSoft Runtime Engine, React JS

<b>Barclays Bank</b>	<b>Knutsford, UK</b>
<b>Senior Agile Developer(Contractor) - Cheque Imaging Clearing Hub</b>	<b>10/2015 - 06/2016</b>

- Implemented business rules and integration solutions for an electronic cheque image processing system.
- Defined build pipelines and created scripts for deployments to OpenShift platform.

**Technologies:** Java, Spring, JDBC, Hibernate, RESTful HTTP & SOAP Web Services, XML/XSD, Camel, Oracle 11g, UML, Jenkins, Git, Maven, Gradle, ActiveMQ, JBoss EAP, OpenShift

<b>Erste Group Bank</b>	<b>Vienna, Austria</b>
<b>Senior Agile Developer(Contractor) - Digital Banking Platform Modernisation</b>	<b>03/2015 - 09/2015</b>

- Designed and implemented solutions for migrating a monolithic digital banking platform to a microservice architecture.
- Collaborated with SMEs in defining APIs for Card, Accounts and User services.
- Collaborated with Product Owners and stakeholders in refining and prioritising product backlogs.
- Facilitated collaboration in a Scrum of Scrums across business units in order to enable feature teams meet sprint goals.

**Technologies:** Java, JavaScript, Spring, JDBC, JPA, SQL, RESTful HTTP & SOAP, Cucumber, JSON,

XML/XSD, AngularJS, Camel, Oracle 12c, UML, Git, Maven, ActiveMQ, Tomcat

<b>Encore Tickets</b>	<b>London, UK</b>
<b>Team Lead, Scrum Master - Ticketing Platform Modernisation</b>	<b>09/2014 - 12/2014</b>

- Led a Scrum team of 4 in designing a microservice architecture blueprint for modernising a monolithic ticketing platform.
- Created and presented architecture designs for implementation by a dev team.

**Technologies:** Java, Spring, JDBC, JPA, SQL, RESTful HTTP, SOAP, JSON, XML/XSD, XPath, Cucumber, JMeter, Camel, MySQL, UML, Git, Maven ActiveMQ

<b>Monitise Group</b>	<b>London, UK</b>
<b>Senior Software Developer - Mobile Banking and Payment Services</b>	<b>07/2012 - 11/2013</b>

- Implemented various payment solutions for the VISA payment processing platform.
- Designed and implemented web interface for managing encryption keys generated by a HSM infrastructure.
- Collaborated with cross-functional teams in the technical planning and design of a global reference platform for a telecommunications service provider.

**Technologies:** Java, Spring, JDBC, JPA, PLSQL/SQL, RESTful HTTP, SOAP, JBehave, Selenium, JMeter, JSON, XML/XSD, XSL/XSLT, XPath, Camel, Oracle 11g, UML, Git, Maven, Ant, Fuse ESB, Glassfish

<b>Net mobile AG/DOCOMO Deutschland</b>	<b>Düsseldorf, Germany</b>
<b>Project Lead, Software Developer - Mobile Payments</b>	<b>06/2010 - 07/2012</b>

- Collaborated with external stakeholders in defining functional and technical requirements for various payment service and mobile carrier billing integration initiatives.
- Implemented and tested Visa 3-D Secure protocol for our payment gateway.
- Led adhoc teams in delivering various optimisation solutions for data ingestion and application workflows.
- Designed and coded various transaction insight tools that generated metric reports and triggered alerts on transaction anomalies.

**Technologies:** Java, Perl, Python, JDBC, JPA, SQL, JSP, Servlets, JSF, Web Services (REST, SOAP/WSDL), XML/XSD, XPath, ActiveMQ, PostgreSQL, Fuse ESB, UML, SVN, Maven, Ant, JMeter, Archi

<b>sms eSolutions GmbH</b>	<b>Düren, Germany</b>
<b>Project Lead, Software Developer - Phone Number Allocation &amp; Porting System</b>	<b>03/2009 - 03/2010</b>

- Collaborated with external stakeholders in defining functional and technical requirements for integrating a phone number allocation and management system.
- Led a team of 4 in implementing the German Federal Network Agency specification for phone number porting and management.
- Coached and mentored junior developers in software best practices.
- Provided 3rd-level support to customers in QA testing and release migration phases.

**Technologies:** Java, EJB, Spring, Shell Scripting, JPA, Hibernate, SQL, Web Services (REST, SOAP/WSDL), XML/XSD, Tomcat, Glassfish v3, ActiveMQ, Oracle 10g, UML, Subversion, CVS, Hudson, Maven, Ant, Eclipse, Umbrello, XML Spy, SQL Developer

<b>Logica GmbH</b>	<b>Düsseldorf, Germany</b>
<b>IT Consultant</b>	<b>05/2008 - 02/2009</b>

- Collaborated with clients in defining functional and technical requirements for an information management system at an electric utility company.
- Consulted with public service clients in optimising and implementing new features for a legacy information management system at a government data center.
- Coded various design solutions.

**Technologies:** Java, EJB, Spring, Shell Scripting, PLSQL, JPA, Hibernate, SQL, JSF, JSP, Servlets, XML, XHTML, Tomcat, JBOSS, Oracle 10g, UML, SVN, CVS, Hudson, Maven, Ant, Eclipse, MagicDraw

<b>Volkswagen AG</b>	<b>Wolfsburg, Germany</b>
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<b>Intern (R&amp;D) - Offboard Diagnostic System</b>	<b>10/2006 - 04/2007</b>
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- Designed and developed concept for a fault diagnostic system. Modelled electrical component networks and decision making strategies using extended Bayesian networks.
- Implemented a prototype inference and decision engine using Java and the Hugin API.

**Technologies used:** Java, Spring, JSP, XML/XSD, XSLT, Tomcat, UML, Together, Hugin Decision Engine

<b>University of Duisburg-Essen</b>	<b>Duisburg, Germany</b>
<b>Programmer &amp; System Administrator</b>	<b>10/2002 - 06/2006</b>

**10/2002 – 06/2006 Programmer & System Administrator, University of Duisburg-Essen, Germany**

- Developed an information management system that motivated funding for a major portal project.
- Member of an architecture planning team that was responsible for a university-wide portal project. Evaluated various portal software solutions such as Liferay and uPortal.
- Tutor for PHP/MySQL programming and mentor for multiple project teams.

**Technologies used:** PHP, Java, Spring, Shell Scripting, JSP, Servlets, XML, XSL/XSLT, XHTML, CSS, Tomcat, JBOSS, Apache HTTP Server, UML, Subversion, Ant, Eclipse, Zend IDE

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## Education

**University of Duisburg-Essen, Duisburg, Germany**

Diplom Ingenieur (M.Sc.) Computer Science and Communications Engineering

## Languages

English and German (fluent)

## Technical Skills

<b>Languages:</b>	Java, Kotlin, Python, Perl, PHP, C/C++, SQL, Shell Scripting,
<b>Modelling:</b>	UML, Archimate
<b>Cloud:</b>	PCF, AWS, Azure
<b>Containerisation:</b>	Docker, Kubernetes
<b>Test Tools:</b>	JMeter, SoapUI, Cucumber
<b>Databases:</b>	Oracle 11g, PostgreSQL, MySQL
<b>Middleware:</b>	Fuse ESB, Glassfish v3, ActiveMQ, RabbitMQ, Kafka
<b>Web Technology:</b>	Servlets/JSP, XHTML, CSS, XML/XSD, XSL/XSLT, JSON, REST
<b>Tools:</b>	Eclipse, XMLSpy, MagicDraw, CVS/SVN/Git, Ant/Maven

## Training:

TOGAF 9, Certified ScrumMaster, PMP Training, Cloudera Data Science Training