Jacek Janczura

[redacted] | linkedin.com/in/jacekjanczura | janczura.com | Berlin

AI-focused CTO and cloud architect with extensive experience designing and delivering enterprise-scale, compliant AI platforms and microservice architectures for financial services and other regulated industries. Proven track record leading cross-functional teams, building real-time decisioning and behavioral analytics systems for ING Bank and ING Group, and architecting multi-tenant AI process automation platforms on AWS and Azure. Combines deep hands-on expertise in machine learning, LLM/RAG systems, and event-driven architectures with strong stakeholder-facing leadership suitable for technical PM/PO, architect, or senior engineering roles in banking and fintech.

Experience

Co-founder & CTO March 2021 – Present

Jaden Data GmbH

- Built Jaden Data from concept to a profitable AI company with over €1M in annual revenue while scaling the engineering organization from 0 to 10 developers.
- Architected and led implementation of a multi-tenant AI platform integrating models from AWS Bedrock, SageMaker, Azure ML Studio, OpenAI, and Mistral, enabling enterprise-grade AI process automation across multiple industries including financial services.
- Designed and deployed an event-driven microservices architecture on AWS (Lambda, ECS/Fargate, SNS, SQS, EC2, S3) optimized for cost-efficiency and serverless autoscaling, handling over 1,000 concurrent connections and thousands of requests per second.
- Led the design and implementation of a Retrieval-Augmented Generation service and AI process testing framework, enabling deterministic evaluation of AI pipelines and automated creation of vector databases from client documents.
- Implemented Prompt Wizard to automate optimization of LLM prompts, significantly improving prompt engineering workflows for enterprise users and operations teams.
- Led the company through ISO 27001 and SOC 2 security and compliance audits, achieving certifications within approximately three months to meet enterprise customer requirements.
- Managed multiple development teams, technology strategy, budgeting, and risk management while maintaining strong communication with enterprise clients, shareholders, and partners.
- Delivered AI-driven automation, knowledge-aware chatbots, and document workflows for over 50 organizations with 99.9% platform uptime, focusing on security, compliance, and performance.
- ***Technologies:*** AWS, Azure, OpenAI, Mistral, Microservices, Serverless, RAG, Pinecone, pgvector, Milvus, Java, Python, Node.js, Ethereum, Hyperledger Fabric, IOTA, Docker

entAIngine – Enterprise AI Process Automation Platform Technologies: *AWS Lambda, AWS ECS/Fargate, SNS, SQS, OpenAI, Azure, AWS Bedrock, Mistral, RAG, RBAC*

- Served as CTO of a SaaS platform for AI process automation that transforms mission-critical back-office operations through intelligent automation, knowledge-aware chatbots, and advanced document workflows.
- Designed the platform to meet stringent enterprise requirements with ISO 27001 and SOC 2 Type 2 certification and full data sovereignty, serving more than 50 organizations with 99.9% uptime.
- Implemented multi-tenant, role-based access control and integrations with leading LLM providers to support secure, scalable AI workflows across production, pharmaceutical, financial services, and enterprise operations.

RP-Matcher – ML Product Matching System for RP Group Technologies: *Python, Scikit-Learn, Random Forest, Extra Trees, Gradient Boosting, Ensemble methods, Pandas, NumPy, GridSearchCV, entAIngine API*

- Led the design and implementation of a machine learning system to automatically match customer inquiries with product offers for emergency lighting solutions, eliminating manual expert-driven selection.
- Delivered a 60% reduction in offer preparation time and enabled the client to scale operations without proportional increases in expert staff by achieving 70.7% Top-1 accuracy and 0.923 AUC-ROC with tuned ensemble models.
- Engineered over 25 domain-specific features and built a robust data pipeline with LLM-assisted extraction via entAIngine, expanding labeled matches by 571% and ensuring consistent feature sets across dataset variants.

KnowledgeX – Trusted Inter-organizational Data Processing Technologies: *Ethereum, Solidity, iExec, Intel SGX, Node.js, Python, IPFS, AWS S3, AES-256, OpenID Connect, Microservices*

- Designed and led implementation of the KnowledgeX Data Science Marketplace, enabling freelance data scientists to build models on private data without direct access to it.

- Architected a modular microservices and blockchain-based workflow covering preparation, agreement, execution, and evaluation phases with services for agreements, execution, user management, matchmaking, audit, and payments.
- Implemented Ethereum smart contracts, TEE-based confidential computing with Intel SGX, and AES-256 encrypted storage on IPFS and AWS S3 to enable privacy-preserving multi-party data processing with immutable audit trails.

Holoni – AI4Cities Clean Energy Platform Technologies: *Blockchain, DLT, Smart contracts, AI/ML, Python, Node.js, REST APIs, IoT integration*

- Led backend implementation and blockchain architecture for HOLONI, a Horizon 2020 cleantech platform enabling municipalities and energy retailers to assess solar potential and automate reward schemes for urban solar prosumers.
- Integrated AI-based solar surplus prediction with blockchain-based result verification and smart contracts for automated compensation based on verified solar contribution.

CBDC Cross-Ledger Bridge – Norges Bank Technologies: *IOTA, Ethereum, Cross-ledger bridge, Smart contracts*

- Acted as technical lead for a cross-ledger bridge between IOTA and Ethereum to explore programmable money and interoperability for central bank digital currencies with Norges Bank.

DiLLaS – Blockchain Supply Chain Platform Technologies: *Ethereum, Hyperledger Fabric, Java, Supply chain, Package tracking*

- Led blockchain development for a supply chain management solution using Ethereum and Hyperledger Fabric with a Java backend for clients including Poste Italiane and Schiphol Container Services.

Software Engineer April 2020 – June 2021

idealo internet GmbH

- Developed real-time, high-performance backend services using Kafka, NoSQL, and WebSockets to support Germany's leading price comparison platform with up to 18 million monthly active users.
- Implemented enterprise-grade microservices and REST APIs in Java and Kotlin with Spring Boot and Spring Security, contributing to production-ready systems and on-call support for 24/7 availability.
- Played a key role in internationalizing idealo's SSO systems and rolling out multi-country login, driving more than 300% increase in customer acquisition and 1.4 million new accounts in three months (700% above forecast).
- Contributed to the migration from on-premise infrastructure to AWS, including analysis, creation, and maintenance of container-based environments.
- Recognized by the employer for excellent specialist knowledge, strong analytical ability, autonomy, and consistently very good performance across complex projects.
- ***Technologies:*** Java, Kotlin, Spring Boot, Spring Security, Hibernate, Kafka, NoSQL, WebSockets, AWS, Docker

Blockchain Engineer May 2019 – April 2020

TU Berlin - Deutsche Telekom Innovation Laboratories (T-Labs)

- Designed system architecture and implemented a distributed Hyperledger Fabric network for blockchain-based package tracking in a logistics and IoT context.
- Developed smart contracts (chaincode), secured REST APIs, and microservices to integrate mobile applications and ERP systems with the blockchain network.
- ***Technologies:*** Hyperledger Fabric, Hyperledger Composer, Node.js, JavaScript, Express.js, Docker, PostgreSQL, JWT

Associate Technical Consultant September 2016 – September 2018

SAS Institute

- Delivered international consulting assignments for ING Bank and ING Group in Madrid and Amsterdam, working on cutting-edge analytics solutions in banking and financial services.
- Co-created and implemented the Model Bank real-time behavioral marketing platform, one of the first real-time user behavior analysis systems in the banking sector, processing thousands of events per second.
- Designed and implemented real-time data pipelines using Apache Kafka, Flink, and Camel, and delivered one of the first SAS Event Stream Processing implementations in the European Union for ING.
- Developed a GDPR lineage plugin for SAS Data Integration Studio that visualized ETL flows and data lineage for compliance, adopted by data analysts across the entire ING Group.
- Optimized database queries and real-time decision software used in major Polish banks, combining Java, Spring Boot, Kafka, Cassandra, and SAS technologies.
- ***Technologies:*** Java, Spring Boot, Apache Kafka, Apache Flink, Apache Camel, Cassandra, SAS RTDM, SAS ESP, SAS DI Studio, PL/SQL

Trainee, Embedded Systems Department June 2016 – September 2016

Impact Clean Power Technology S.A.

- Implemented a tester for Solaris bus battery management systems and contributed to secure embedded communication for electricity measurement devices used by energy provider RWE (Innogy).
- ***Technologies:*** C, CAN, I2C, SPI, LDRA Testbed

Education

Technische Universität Berlin — Berlin, Germany
M.Sc. Computer Science — Grade: 1.3 (A) — *October 2017 - September 2020*

Warsaw University of Technology — Warsaw, Poland
M.Sc. Computer Science — Grade: 1.0 (A) - The Honors Diploma — *October 2017 - September 2020*

Technische Universität Hamburg-Harburg — Hamburg, Germany
Exchange Semester, Computer Science — *October 2015 - March 2016*

Warsaw University of Technology — Warsaw, Poland
B.Sc. Electronics and Computer Engineering — Grade: 1.0 (A) — *October 2013 - June 2017*

Technical Skills

AI:	Machine learning, LLMs, Retrieval-Augmented Generation (RAG), Vector databases, Scikit-Learn, TensorFlow, Keras, Pandas, Feature engineering
Cloud:	AWS, Azure, Serverless, Event-driven architectures, Microservices, AWS Lambda, AWS ECS/Fargate, AWS Bedrock, AWS SageMaker
Architecture:	Enterprise architecture, Software architecture, Microservices design, Real-time data processing, High-throughput systems, Multi-tenant SaaS, Security by design, Event streaming, API design
Backend:	Java, Kotlin, Python, JavaScript, Spring Boot, Spring Security, Hibernate, FastAPI, Express.js
Fintech:	Banking analytics, Real-time behavioral marketing, Financial services AI, Central Bank Digital Currency (CBDC), GDPR compliance, Data lineage, High-volume transaction processing
Leadership:	CTO leadership, Technical product ownership, Team management, Stakeholder communication, Mentoring, Strategy and roadmap, Risk management, Budgeting, Cross-functional collaboration
Data:	Apache Kafka, Apache Flink, Apache Camel, Real-time decisioning, Cassandra, PostgreSQL, MongoDB
Security:	ISO 27001, SOC 2 Type 2, Multi-tenant security, RBAC, Confidential computing, Intel SGX, GDPR, Blockchain-based audit trails
Blockchain:	Ethereum, Solidity, Hyperledger Fabric, IOTA, Smart contracts, Cross-ledger bridges, Enterprise blockchain

Publications

Jacek Janczura et al.. *DeCoCo: Blockchain-based Decentralized Compensation of Digital Content Purchases.* Conference on Blockchain Research & Applications for Innovative Networks and Services (BRAINS 2020), Paris, France. 2020.

Jacek Janczura et al.. *Saluki: Finding Taint-style Vulnerabilities with Static Property Checking.* 2018.

Jacek Janczura et al.. *KnowledgeX: Trusted Inter-organizational Data Processing.* 2022.

Honors & Awards

2nd Place - Berlin Legal Tech Hackathon, Berlin Legal Tech, 2020
Led a team to build an NLP-based solution for detecting and moderating online hate speech, combining natural language processing with real-time content analysis.

University President's Undergraduate Scholarship, Warsaw University of Technology, 2014-2017
Most prestigious undergraduate scholarship awarded four years in a row for exceptional academic performance in computer science.