



CURRICULUM VITAE

Francesco Ryplewitz

Founder and Principal Consultant

FOCUS	Business applications and process digitalisation
EXPERIENCE	Software development since 2020
APPROACH	AI-assisted, from analysis to operations
LOCATION	Dresden

PROFILE

Business applications that simplify processes.

Since 2020, Francesco Ryplewitz has been developing business applications that simplify and digitalise processes in companies: from requirements analysis through design and implementation to operation.

He uses artificial intelligence on two levels: in development itself, to arrive at robust results faster, and in the solutions, for example for speech recognition, document analysis and process automation.

He brings extensive project experience, including in construction and real estate, sustainability, finance and the public sector.

INDUSTRY EXPERIENCE

Construction and Real Estate

Sustainability and ESG

Finance

Public Sector

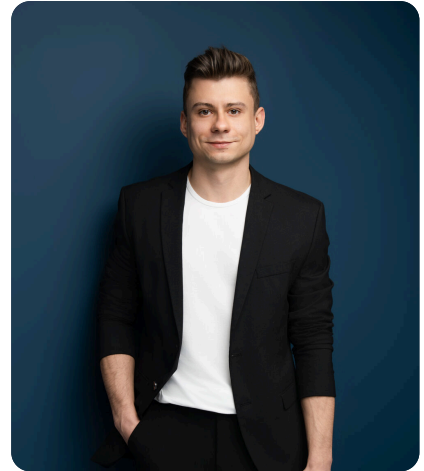
VALUES

Integrity

Reliability

Commitment to quality

Honesty



SKILLS

AI and automation

- Integration of language models (LLM)
- Document analysis (OCR and LLM)
- Speech recognition (speech-to-text)
- AI-assisted software development with agents

Frontend

- JavaScript and TypeScript
- Vue.js
- Single-page applications
- UX for business applications

Backend

- Node.js
- Express
- Prisma ORM
- Relational databases

Cloud and DevOps

- AWS (ECS, RDS)
- CI/CD and automated testing
- Release management
- Monitoring

Consulting and methods

- Requirements analysis and workshops
- Process analysis
- Project management and agile delivery
- Coordination of development teams

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Recent projects

PERIOD

since Sep 2026

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

Claude

MCP

Microsoft Entra ID

SQLite

AWS Bedrock

Python

Docker

AWS

Company-wide AI assistant with its own knowledge base

Development of an AI platform that makes company knowledge available in structured form and gives AI assistants controlled access to the company's systems. At its core is a dedicated MCP server: employees sign in with their Microsoft 365 account, and the assistant sees only the knowledge and functions their role permits. The platform is vendor-independent and is used with Claude.

RESPONSIBILITIES

- Design of the target architecture: vendor-independent, auditable, with approval before every write access
- Dedicated MCP server with sign-in via Microsoft Entra ID; permissions for knowledge and functions follow the company's Microsoft 365 groups
- Structured knowledge base with clear rules for structure and expansion; index in SQLite with hybrid search by keyword and meaning (full-text and vector search via AWS Bedrock)
- Knowledge maintenance directly in the chat: employees suggest additions, those responsible approve them, and new versions go live automatically, without anyone needing to know Git
- Integration of the company's own project management software, for example for master data with a duplicate check
- Filing of email attachments: the assistant uses the folder structure to suggest the right storage location in SharePoint and files the attachments once confirmed
- Commercial reports on demand, without building dedicated dashboards
- Operation on AWS in Frankfurt with an audit log for every access and automated quality assurance

PERIOD

Jan 2026 – Sep 2026

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

ZUGFeRD

GAEB

JavaScript

Node.js

Vue.js

AWS

ERP for quotations, contracts and billing

Development of a multi-tenant ERP system for a property developer with several subsidiaries. The system covers the entire commercial lifecycle of a construction project, from the initial cost estimate and quotation through contract and change orders to the final invoice. It replaces the standalone solutions that the individual companies had used until then; their existing data was transferred to the new system.

RESPONSIBILITIES

- Development of the concept together with the client in several requirements workshops, architecture design
- Multi-tenant architecture so that each subsidiary can create its own quotations, contracts and invoices
- Editor for dynamic document templates with placeholders that are filled automatically with project data when a document is created

- Item management for detailed bills of quantities, including import and export in the common GAEB formats
- Invoicing module for direct, progress and final invoices, with progress invoices based on contractual payment schedules and a cancellation function
- Generation of e-invoices in ZUGFeRD format in line with EU standard EN 16931 and legally compliant filing in the client's document management system
- Migration of existing data from the subsidiaries' previous systems

PERIOD

Oct 2025 – Jan 2026

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

OCR

Language model (LLM)

JavaScript

Node.js

Vue.js

AWS

Integrated cost management

Development of a finance module for property developers that seamlessly connects costing, contract award and billing. Planned and actual costs are reconciled continuously, so the cost status is always up to date.

RESPONSIBILITIES

- Development of a hierarchical cost structure to map trades, items and budget levels
- Module for generating subcontractor contracts directly from the costing
- Integration of AI-assisted document analysis (OCR/LLM) for structured processing of invoices
- Implementation of real-time logic to reconcile budget, contracted work and invoiced amounts

PERIOD

Sep 2025 – Oct 2025

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

WhatsApp Business API

Speech recognition (OpenAI)

Language model (OpenAI)

Node.js

Vue.js

AWS

Site documentation via WhatsApp

Development of a site documentation solution operated entirely via WhatsApp. AI converts voice messages and photos into structured construction progress reports, which are filed automatically in the project management system. This significantly lowers the barrier to documentation on site.

RESPONSIBILITIES

- Integration of the WhatsApp Business API (Meta) via webhooks as the primary user interface
- Development of logic for transcription (speech-to-text) and semantic analysis (LLM) to extract tasks, progress and relevant metadata
- Automated retrieval of external data sources (e.g. weather APIs) for supplementary evidence preservation
- Algorithmic assignment of images to the relevant construction stage and project context
- Development of a web interface for managing and archiving the generated progress reports

PERIOD

Jul 2025 – Sep 2025

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

JavaScript

Node.js

Project control and collaboration

Development of a central tool for documenting and controlling construction progress and open tasks. Having tasks and communication in one place reduces switching between tools and speeds up coordination.

RESPONSIBILITIES

- Integration of a context-based chat directly at task level

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Vue.js
AWS

- Development of an interactive board view for structured handling of open items
- Implementation of high-performance filter and search mechanisms for complex project data
- Modelling of relational structures between projects, tasks, communication histories and users

PERIOD

Apr 2025 – Jul 2025

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

JavaScript
Node.js
Vue.js
AWS

Construction scheduling

Development of an interactive planning tool with Gantt charts for scheduling complex construction projects. The aim was to identify conflicts between trades early and to work with an up-to-date schedule at all times.

RESPONSIBILITIES

- Implementation of a high-performance Gantt visualisation with drag-and-drop functionality
- Automatic checks for overlapping subcontractor assignments
- Integration of automated notifications for schedule revisions
- Full version history for construction schedules

PERIOD

Oct 2024 – Mar 2025

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

JavaScript
Node.js
Vue.js
AWS

Site management tool with defect management

Implementation of a legally compliant digital workflow system for operational construction process and claims management. The solution covers the entire lifecycle of matters relevant under construction law, from defect notices, notices of concern and notices of obstruction during the construction phase through to warranty tracking after acceptance. The aim was to standardise all contract-relevant matters, make them verifiable and transparent across the portfolio, and professionalise structured communication with subcontractors.

RESPONSIBILITIES

- Modelling of complex workflows including escalation and decision logic for defect notices, notices of obstruction and notices of concern
- Automatic generation of legally relevant letters as PDFs for formal dispatch
- Implementation of a system for monitoring deadlines, extended deadlines, escalation levels and follow-up actions (e.g. substitute performance)
- Development of cross-project dashboards providing transparency on notices, deadline status and quality indicators

PERIOD

Mar 2024 – Sep 2024

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

JavaScript
Node.js
Vue.js
AWS

Project management system

The system brings together the management of clients, suppliers and construction projects. At its core is a structured phase model that standardises the control and documentation of every project. The integration with Microsoft 365 makes collaboration within the company easier.

RESPONSIBILITIES

- Coordination of the development team
- Requirements analyses

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- DevOps management
- Software development with Node.js, Express, Prisma, Vue.js and Quasar

PERIOD

Oct 2023 – Jun 2024

INDUSTRY

Sustainability and ESG

TECHNOLOGIES

Node.js

SAP

SAP CAP

Materiality assessment under the CSRD

The application supports companies with the double materiality assessment (DMA) required by the EU Corporate Sustainability Reporting Directive (CSRD). It assesses the company's impact on the environment and society and, conversely, how environmental and social factors affect the company. Guided input checks that the information is complete, and reports help to identify and evaluate risks and opportunities.

RESPONSIBILITIES

- Development of technical implementation concepts based on business requirements
- Development of a CI/CD pipeline for quality assurance
- Setting up an SAP BTP infrastructure
- Software development with Node.js, SAP CAP, SAP BTP and SAP HANA

PERIOD

Sep 2023 – Mar 2024

INDUSTRY

Construction and Real Estate

TECHNOLOGIES

JavaScript

Node.js

Vue.js

AWS

Property data capture

The tool captures property data in a structured and complete way. Guided input leads users through the process, and built-in checks flag missing information. As the application is web-based, it works from any location on all common devices.

RESPONSIBILITIES

- Coordination of the development team
- Requirements analyses
- DevOps management
- Software development with Node.js, Express, Prisma, Vue.js and Quasar

PERIOD

Dec 2021 – Sep 2023

INDUSTRY

Finance

TECHNOLOGIES

Node.js

SAP

SAP CAP

Digital funding application process

The application guides applicants through the application step by step and checks the information for completeness and plausibility. Communication with the authorities involved is automated. Interfaces to SAP ERP and Postident connect existing processes and enable legally compliant identity verification.

RESPONSIBILITIES

- Software development with Node.js, SAP CAP and IBM Db2
- Development of a comprehensive status model to map the funding process
- Development of interfaces for data synchronisation with third-party SAP systems
- Co-ordination of the development team

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PERIOD

Oct 2020 – Nov 2021

INDUSTRY

Public Sector

TECHNOLOGIES

Node.js

SAP

SAP CAP

Document management

The system manages official documents such as certificates and diplomas in structured processes. Documents can be given qualified electronic signatures under eIDAS, which in the EU have the same legal standing as a handwritten signature. Via a public verification portal, third parties can reliably verify the authenticity of a document.

RESPONSIBILITIES

- Development of technical implementation concepts based on business requirements
- Integration of qualified electronic signatures (QES) under eIDAS
- Setting up an SAP BTP infrastructure
- Software development with Node.js, SAP CAP, SAP BTP and SAP HANA

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