Rei Doda

Software Engineer

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SUMMARY

Software engineer focused on building real-world systems across AI, optimization, and automation. Developed an AI OCR/document-processing SaaS with automated extraction and database categorization. Built a warehouse route-optimization and inventory platform. Delivered an edge computer-vision + robotics QC solution and integrated smart-building technologies in hospitality.

SKILLS

Python, Java, TypeScript, C, C++, SQL, Spring Boot, Django, FastAPI, Angular, Node.js, REST, gRPC, Kafka, TensorFlow, PyTorch, scikit-learn, Lang Chain, OCR, LLMs, RAG, PostgreSQL, MySQL, MongoDB, Oracle Database, Linux, Docker, CI/CD, Deployment automation.

EXPERIENCE

Autotrend — AI & Automation Engineer
Bari, Italy   Mar 2026 – Present

- Designed and implemented automated business workflows to optimize operational efficiency and reduce manual tasks. Developed and deployed AI-driven agents for internal and customer-facing processes using state-of-the-art LLMs and NLP technologies.

Mövenpick Hotel (Accor Group) — Chief Engineer
Durrës, Albania   Jul 2023 – Jun 2025

- Led hotel engineering operations while delivering smart-building software integrations across critical infrastructure systems. Managed BMS/EMS, HVAC, generators/UPS, solar monitoring, and life-safety systems, ensuring compliance, uptime, and preventive maintenance execution. Designed and implemented the "smart layer" by integrating access-control/doors, CCTV, alarm events, EV charging, and smart parking systems into centralized monitoring and dashboards, enabling automated alerts, work-order creation, and audit-ready reporting. Built and maintained integrations between HR/employee workflows and building systems (onboarding/offboarding access provisioning, permissions, logs), and enforcing cybersecurity practices for networked devices and OT/IT environments.

Upnova Group S.r.l — Lead Software Engineer
Bari, Italy   Oct 2022 – Aug 2024

- Built and shipped an AI-powered document-processing SaaS using Python and Django, providing secure APIs and an end-to-end workflow for document ingestion, review, export, and automatic categorization into a structured database. Implemented Tesseract-based OCR pipelines with image/PDF preprocessing and post-processing to improve text quality. Developed PyTorch and LLM-powered features for document classification, key information extraction, and summarization, and added RAG pipelines with LangChain to answer questions over document corpora and improve accuracy by grounding outputs in retrieved content.

Genesys Software S.r.l — Software Engineer
Bari, Italy   Nov 2021 – Sep 2022

- Developed a full warehouse picking and route-optimization system centered on a high-performance C/C++ routing engine that computes shortest paths and optimized pick sequences by modeling the warehouse as a weighted graph with operational constraints (one-way aisles, restricted zones). Built data pipelines and tooling to import/export warehouse maps and master data via XML/CSV, and exposed routing/selection functions through gRPC for integration with WMS/mobile clients. Implemented barcode-driven workflows to enforce FEFO (closest expiry selection), confirm picks, and update inventory in PostgreSQL with lot/expiry traceability. Integrated real-time position and status updates using RTLS, publishing events through Kafka to support monitoring, exceptions, and analytics.

Vallefiorita — Software Engineer   Sep 2020 – Oct 2021
Bari, Italy

- Built an edge visual-inspection and rejection system for automatic quality analysis of *puccia salentina* at oven output using Raspberry Pi (Linux/Debian) with Python 3 and OpenCV. Implemented a real-time computer-vision pipeline with live calibration (ROI/HSV thresholds, filtering, brightness/contrast), product detection via masking and morphology, and rule-based classification (OK vs burned) using size/radius and color-intensity thresholds. Integrated GPIO/relay outputs and Arduino/ESP8266 control to drive a robotic arm that automatically removes burned *puccia* from the line, and added traceability by logging results to Google Sheets and archiving images to Google Drive. Deployed the system as a systemd service for continuous boot-time operation.

VOLUNTEERING

EG Global — Ambassador   Dec 2021 – Jan 2025
Worldwide

- Supported non-profits and social entrepreneurs through coordination, promotion, and community engagement.

- Contributed to initiatives focused on transparent impact and accessible collaboration.

Fondazione Giovanni Paolo II ETS — Student Teacher   Nov 2021 – May 2024
Bari, Italy

- Taught introductory Python programming with focus on computational thinking and problem-solving.

EDUCATION

BSc in Computer Science — University of Bari "Aldo Moro", Bari, Italy

LANGUAGES

Albanian (Native) · Italian (Full professional proficiency) · English (Full professional proficiency)