Michał Dołchoń

Backend / Fullstack Developer

TypeScript · Node.js · Go · PHP · Kotlin

📍 Prudnik / remote
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Profile

I design scalable solutions that deliver business value.

Why me?

⚡ Production-Ready
4 years shipping scalable solutions for blockchain, AI, and IoT systems. More than 7 years of coding experience overall

🧱 Versatile Tech Stack
Polyglot developer: TypeScript, Go, PHP, Kotlin, Python - choosing the right tool for each challenge

🚀 Bleeding Edge
Pioneering implementation of zk-SNARKs for privacy in smart-contract flows, plus on-premise ML and LLM deployments

☁️ Cloud & DevOps
Azure, AWS, Terraform, Grafana, New Relic, CI/CD - infrastructure as code, production monitoring

Professional Experience

Backend Developer

VAIOT - vaiot.ai

blockchain × AI × legal tech

🗓️ 01.2023 - 01.2026 | 🌍 Remote (Warsaw)

🎯 Key Responsibilities

- Designed and developed production backends (monolith + microservices) powering blockchain transactions

- Architected and built from scratch the backend for assistant.vaiot.ai and ddrs.vaiot.ai (API, integrations, data pipelines)
- Co-created, maintained, and delivered new backend features for legaltorch.mt / legaltorch.pl and firmowy-prawnik.pl (originally vendor-built, but I took over feature development and stability)
- Implemented an invoicing system integrated with legal processes and on-chain transactions
- Built a Twitter/X & Telegram raffle system: wallet linking, token rewards, bot detection/removal
- Developed internal tools for legal assistant: automated synchronization of settings, regulations, rulings, and judgments
- Built a unified email service for all projects-cost-effective, reliable, and scalable (Mailchimp was too expensive)
- Co-developed a universal crypto payment service (VAI, ETH) used across multiple products and teams
- Pioneered zk-SNARK / SK-SNARK implementation for contract privacy and data certification
- Managed cloud infrastructure (Azure/AWS) with Terraform and CI/CD; heavy Redis usage (cache/queues/sync) and MongoDB

Tech Stack

Node.js, TypeScript, Go, Kotlin, PHP, NestJS, Laravel, Jest, Supertest, Microservices, Redis, MongoDB, Azure, AWS, Terraform, Docker, CI/CD, GitHub Actions, OpenAI, Azure CLU, RAG, UML

Fullstack Developer

RSvend Sp. z o.o. / Selfibox
vending machine software
🗓️ 01.2022 - Present | 🌍 Remote (Wrocław)

🎯 **Key Responsibilities**

- Built and maintained backend + frontend systems for vending machine networks (photo souvenirs)
- Designed and implemented a cash payment system for vending machines (acceptors, and sales flow integration)
- Designed and implemented receipt generation and printing system (integration with physical devices)
- Planned, managed, and deployed end-to-end kiosk solutions for fairs and events
- Planning, management, and end-to-end deployment of kiosks for order handling at fairs and events
- Developed embedded/IoT-like software with MQTT communication and Redis state synchronization
- Fine-tuned and deployed Gemini 2.5/3; trained local LLMs (LLaMA, Ollama, LangChain) for edge/on-prem scenarios

Tech Stack

Node.js, TypeScript, PHP, Go, Python, NestJS, Laravel, Strapi, n8n, Flutter, Jest, MQTT, Redis, Docker, YOLOv9, faster-whisper, XTTSv2, Chatterbox, Gemini, RAG, LLaMA, Ollama, UML

Fullstack Developer

Prywatna Agencja Wywiadowcza Redigo Sp. z o.o.
🗓️ 09.2020 - 01.2022 | 🌍 Wrocław

🎯 Key Responsibilities

- Built and scaled web applications based on Laravel + Nuxt
- Created an application encrypting and synchronizing data between agency computers
- Optimized performance and SEO of existing services (SEO + performance)

Tech Stack

PHP, Laravel, Nuxt.js, TypeScript, PostgreSQL, Alpine.js, Python

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Freelance Web Developer

🗓️ 11.2018 - 12.2021 | 🌍 Remote

🎯 Key Responsibilities

- Delivered websites and web applications for individual clients and small businesses (tax-acta.com, ask-ebike.pl, grupahedron.pl, armet24.pl, almcosmetics.com.pl)
- Built scraping, automation, and integration tooling in Python
- Delivered additional services: video/ad editing, simple graphics, occasional 3D rendering

Tech Stack

PHP, TypeScript, Nuxt, SvelteKit, Strapi, Laravel, Python, Tailwind

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Earlier Experience (2018-2019)

Sales, customer service, office work, security, warehouse assistance
→ quick adaptation, working under time pressure, direct customer contact

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📊 Notable Achievements

AI assistant backend from scratch (Vaiot.ai)

API · Integrations · Data pipelines · Production rollout

Problem: Deliver a reliable backend for an AI assistant with multiple integrations and evolving requirements.

Approach:

- Designed API boundaries, validation, authentication, and integration points
- Implemented data ingestion/sync with idempotency and retries

- Added observability (logs/metrics) and deployment automation
- Integration of Azure CLU and OpenAI with RAG

Outcome:

- Faster iteration without breaking production
- More predictable deployments and easier debugging
- A base architecture that scales with new features

Tech Stack: TypeScript, Node.js, Redis, Docker, Cloud, CI/CD

Unified email delivery service (Vaiot.ai)

Multi-project platform · Cost control · Deliverability

Problem: Multiple products needed email sending with consistent templates, tracking, and lower costs.

Approach:

- Built a shared service with standardized templates and routing
- Added queues/retries and monitoring for deliverability issues
- Provided a simple API so teams could integrate quickly

Outcome:

- Reduced duplication across projects
- Improved reliability of notifications
- Lowered operational overhead and vendor dependence

Tech Stack: Node.js, TypeScript, Nest.js, GraphQL, Queues, Observability

Cash payments in IoT vending machines (Selfibox)

Hardware integration · Edge constraints · Reliability

Problem: Implement a robust cash payment flow across devices (acceptors, receipts) in the field.

Approach:

- Modeled device state machines and failure scenarios
- Implemented safe retries and reconciliation for transactions
- Integrated receipt printing and end-to-end monitoring

Outcome:

- More stable on-site sales flows
- Fewer manual interventions for operators
- Clearer incident diagnosis when devices misbehave

Tech Stack: MQTT, Redis, TypeScript, Nest.js, PHP, IoT

Payment gateway: crypto + Stripe + Przelewy24 (Vaiot.ai)

Unified payments · Webhooks · On-chain integration

Problem: Support multiple payment providers (crypto + card + local transfers) with a consistent status model, safe retries, and direct blockchain integration.

Approach:

- Implemented a unified payment abstraction (create/confirm/refund) across providers
- Handled webhooks with signature verification + idempotency keys to prevent double-processing
- Integrated on-chain confirmation directly into the gateway (smart-contract events → payment status)
- Added reconciliation and alerting for mismatched states and edge cases

Outcome:

- Fewer payment-related incidents and faster debugging
- Consistent payment UX across products and teams
- Safer rollouts with deterministic retries and audits

Tech Stack: TypeScript, Nest.js, Node.js, Stripe, Przelewy24, Webhooks, Redis, Smart contracts

DDRS backend (Vaiot.ai)

Integrations · Data sync · Reliability

Problem: Build and evolve a production backend with external integrations and frequently updated domain data.

Approach:

- Designed APIs and data flows with caching and rate limiting where needed
- Implemented robust sync jobs (retries, backoff, idempotency) for external data sources
- Improved observability and operational readiness (dashboards, alerts)

Outcome:

- More stable operations under changing data and integrations
- Lower mean time to detect/resolve incidents
- A maintainable platform for further feature development

Tech Stack: TypeScript, Nest.js, Node.js, Redis, Integrations, Monitoring

On-prem AI for kiosks: vision + voice + RAG agents (Selfibox)

Computer vision · STT/TTS · RAG · Edge / on-prem

Problem: Add reliable AI features to kiosk workflows under edge constraints (latency, offline tolerance) while keeping operations predictable.

Approach:

- Implemented vision processing with YOLOv9 for detection/verification in the flow
- Added speech-to-text via faster-whisper and text-to-speech via XTTSv2 + Chatterbox for natural interactions

- Built AI agents with RAG using Gemini 2.5/3; embeddings via granite-embedding:278m and multilingual-e5-base for fast local retrieval
- Designed the architecture for on-prem deployment: cache, retry, and observability for operators

Outcome:

- Full voice support and user guidance through fortune-telling flows
- Greater automation and fewer manual interventions
- More stable operation thanks to edge-friendly architecture and monitoring

Tech Stack: YOLOv9, faster-whisper, XTTSv2, Chatterbox, Gemini 2.5/3, RAG, granite-embedding:278m, multilingual-e5-base

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Tech Skills

💻 Backend

TypeScript · JavaScript (ES6+) · Node.js · Go · PHP · Kotlin · Python

🧩 Frameworks & Libraries

NestJS · Laravel · Strapi · n8n · Flutter / Dart · Supabase · Prisma · TypeORM · Sequelize · PocketBase

🎨 Frontend

Svelte / SvelteKit · Nuxt.js · Astro · React (basics) · Tailwind CSS · Bootstrap · Alpine.js

☁️ Cloud & DevOps

Docker · Kubernetes · Terraform · Azure · AWS · GCP · Serverless / Functions · CI/CD · GitHub Actions · Git · GitHub Copilot

📐 Architecture & Methodologies

Microservices · Monolith · REST · GraphQL · WebSockets · Event-driven

🗄️ Databases & Data Stores

PostgreSQL · MySQL · MongoDB · Redis

🧪 Testing & Observability

Jest · Supertest · TDD

📡 Messaging & Integration

MQTT · Redis Pub/Sub · RabbitMQ · Mosquitto

💳 Payments & Integrations

Stripe · Przelewy24 · Crypto Payments (VAI, ETH)

🤖 AI & Machine Learning

OpenAI GPT · Azure CLU · LangChain · Llamaindex · RAG · LLaMA · Ollama · Gemini · YOLOv9 · faster-whisper · XTTSv2 · Chatterbox

⛓️ Blockchain

zk-SNARK · Smart Contracts · Web3 Integration

🛠️ Tools & Other

UML · Grafana · New Relic · Postman · Screaming Frog · Figma · GIMP / Photoshop

💾 Operating Systems

Windows · Debian / Ubuntu · macOS

Methodology & Soft Skills

Clean Code & Architecture - focusing on maintainable, scalable solutions
TDD - test-driven development for critical paths
Remote Collaboration - effective async communication and ownership
Quick Learner - adapting to new technologies and domains rapidly
Production Mindset - observability, cost-awareness, and reliability first
Pragmatic Engineering - choosing the right tool for the job

Side Projects

🎵 **Multi-Server Music Bot**
Mumble + Discord music bot with multi-server support and advanced audio streaming (TypeScript, Python)

🔒 **Encrypted VoIP Communicator**
End-to-end encrypted voice communication application (Java)

📋 **Data And Contract Manager**
Enterprise tool for data management and contract administration (C#)

🧶 **Crochet It**
Mobile app for tracking crochet project progress. Published on Google Play
→ View on Google Play (Dart, Flutter)

🛒 **Custom E-commerce Platform**
Building a modern e-commerce platform from scratch (In progress)

Languages

- GB **English - B2**
  Reading technical documentation without problems, email communication and meetings
- PL **Polish - native**

Interests

- 🤖 AI & Blockchain technologies
- 📸 Photography
- 🎵 Music production
- 🐾 Animals
- 🖨️ CAD/CAM design and 3D printing

Ready to bring this experience to your team? Let's talk.

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