

Volodymyr Shcherbyna

Software Engineer (Ruby on Rails, Python, TypeScript)

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● Summary

Software engineer working with Ruby on Rails since 2008. Builds and maintains web applications, APIs, data-processing pipelines, integrations, and developer tools; works across Ruby, Python, TypeScript, PostgreSQL, Linux, and Docker. Recent work includes LLM-assisted document processing, stateful workflows, GraphQL services, and local desktop tooling.

◆ Core technologies

BACKEND & DATA

Ruby on Rails, Django, Grape, GraphQL-Ruby, Node.js/Express, REST APIs, PostgreSQL, MySQL, SQLite, Redis, Cassandra, Elasticsearch

DELIVERY & INTEGRATION

Docker, Nginx, Sidekiq, RSpec, pytest, WebMock, OAuth, JWT, webhooks, Shopify API, Cloudflare, GitHub Actions

LANGUAGES

Ruby, Python, TypeScript, JavaScript, SQL, Bash, C/C++, Java; AngularJS and JavaScript frontend work

AI & SYSTEMS

OpenAI API, PDF extraction, structured pipelines, Linux, GNOME, D-Bus, /dev/input, QMK/Vial, ESP32, Arduino, KiCad

■ Experience

ToughCommerce

BACKEND ENGINEER · JAN 2021 - 2025

Ruby on Rails, GraphQL-Ruby, TypeScript, Stripe, Slack

- Developed Rails GraphQL types, mutations, resolvers, subscriptions, and specifications, including invoice creation, status lifecycle, search, and filters.
- Implemented TypeScript API work for Stripe webhooks and Slack dispute clients.
- Added internal AI/MCP tooling that reduced production incident diagnosis from hours to minutes.

TalentBank

BACKEND ENGINEER · 2024

Python, Django, Docker, Nginx, OpenAI API

- Built a step-based, resumable CV-processing pipeline with a status state machine, PDF ingestion and generation, and structured LLM extraction with retry limits.
- Reduced the processing time of one CV from hours to about half an hour.

HubRise order integration

FREELANCE · 2020 - 2021

Ruby, Shopify API, REST, RSpec, WebMock

- Built a Shopify-to-HubRise order integration with API clients, a custom error hierarchy, and end-to-end integration tests.
- Kept failure handling and external-service behaviour explicit through REST contract tests.

CityFALCON — financial-news platform

RUBY ON RAILS DEVELOPER · 2018 - 2020

Ruby on Rails, PostgreSQL, Cassandra, Elasticsearch

- Developed features and scraper work across Rails, PostgreSQL, Cassandra, and Elasticsearch.
- Made JavaScript and React production fixes alongside the backend work.

Graddit — company reviews and Q&A platform

FREELANCE · OCT 2018 - JAN 2019

React, React Router, Material UI, Ruby on Rails API, PostgreSQL

- Built the entire React frontend solo: components, pages, layouts, routing, component state, forms, auth flow, and localization.
- Delivered the Rails API in parallel: data modeling, authentication, and the REST endpoints the React client used.

■ Experience (continued)

Distodi / Medicardo

FOUNDER · 2017 - 2018

Ruby on Rails, web portals, information systems

- Founded and developed web portals, information systems, and mobile web-oriented features.
- Owned technical decisions and delivery across the product work.

CRM for a non-government organization

INDEPENDENT PROJECT · 2017 - 2019

Ruby on Rails, Grape, AngularJS, CanCanCan, Mailgun, Prawn, LiqPay, WebSocket

- Took over, maintained, and extended a CRM with 65 models and more than 60 REST endpoints.
- Implemented permissions, PDF generation, payment integration, campaign email, WebSocket features, and a full AngularJS SPA.

Coupa — cloud procurement SaaS

RAILS DEVELOPER · 2013 - 2017

Ruby on Rails, Redis, PostgreSQL, REST

- Worked on the core team, building Rails and Redis-backed shared platform components.

BMC Release Process Management

RAILS DEVELOPER · 2013 - 2017

Rails, JRuby, TorqueBox/JBoss, Rake

- Developed features for release planning and deployment automation.

Engineering academy mentoring

MENTOR · 2013 - 2017

Teaching Ruby on Rails

- Mentored students in a company academy; about 60% of them joined the company.

LTLPrints — print-products e-commerce

RAILS DEVELOPER · JUN 2010 - JAN 2013

Ruby on Rails, e-commerce, Linux deployment and server administration

- Developed full-stack features for the e-commerce platform.
- Maintained deployment and server-side operation for the application.

Freelance web applications

RUBY ON RAILS DEVELOPER · JUN 2007 - JAN 2010

Ruby on Rails, relational databases, web applications

- Delivered Ruby on Rails web application work for freelance clients from database design through application features.
- Established the Rails and SQL foundation used throughout later product work.

◆ **Own products and tools** (2025 – 2026)

TUSK — voice assistant

OWN PRODUCT · SEEKING INVESTMENT

Python, WebRTC VAD, Whisper, local/Groq STT, tool calling

- Built a hands-free, Jarvis-like desktop assistant: an always-listening GNOME agent with dictation, desktop automation, and model switching.
- Cut latency and token use with a gatekeeper model, talk/planner/executor agents, and context compacted into topic chunks.

CampaignLoop

OWN PRODUCT · SEEKING INVESTMENT

Next.js, TypeScript, PostgreSQL, Drizzle, MCP

- Designed a control plane and data plane for personal AI agents in marketing teams: one source of truth with an MCP gateway, task claiming, and human approval for spend, launch, and targeting changes.
- The web UI is React/Next.js and was built with AI coding agents.

Software Factory

OWN TOOL

Python, SQLite, Docker, GitHub

- Built a Python control plane that turns a labelled GitHub issue into reviewable pull requests; architecture, plans, and final merges stay human-approved.

zoomarch

OWN TOOL

TypeScript, Vite

- Created a C4-model architecture DSL and a zoomable renderer: one file holds all four C4 levels.

Crypto trading platform

PERSONAL PROJECT · 2025

Ruby, RabbitMQ, PostgreSQL, Docker, Kubernetes

- Built five Ruby microservices with wallet and position state machines, cent-based money handling, and simulated order execution.

SynthSketchShop

OWN BUSINESS

Node.js, OpenAI, OpenRouter, AI image tools

- Built a pipeline for trend research, AI image generation, upscaling, catalogue preparation, and social distribution.

PetProjects.app

OWN BUSINESS

Rails 8, GraphQL, React, Google OAuth, Cloudflare DNS

- Built a free-subdomain registration service; the React frontend was built with AI coding agents.

AI Pub Research

PERSONAL PROJECT

React, TypeScript, Supabase

- Research assistant that turns scientific papers into a document for a specific reader; mostly AI-generated.

◆ **Hardware and electronics**

ESP32-CAM meter reader

HARDWARE · DEC 2024 - MAR 2025

C++, PlatformIO, ESP32-CAM, Wi-Fi

- Built firmware with OV2640 capture, JPEG HTTP upload, PWM flash, and deep sleep; a deployed device sent images to a Rails server in Docker.

ATtiny light effects

HARDWARE

C, ATtiny13/ATtiny10, PWM

- Wrote light-effects firmware within 1 KB of flash using Timer0 software PWM, a PROGMEM gamma table, and a long-press state machine.

Dilemma split keyboard

HARDWARE · ADAPTED OPEN-SOURCE FIRMWARE

QMK, Vial, RP2040

- Adapted existing QMK/Vial firmware for a BastardKB Dilemma bought assembled; I am not the firmware's author.
- Reverse-engineered the wiring between the halves, reconfigured the split serial link and GPIO mapping, and ported the existing MaxTouch driver.

KiCad PCB projects

HARDWARE · 2018 - 2021

KiCad, soldering including SMD

- Completed more than 10 projects from schematic to Gerber, including battery indicators, a cabin light, and an Arduino Nano RGB lantern; one board went through 12 revisions.

◆ **Open source**

TUSK

PYTHON

- Public Linux/GNOME voice-assistant project with local and hosted speech-to-text paths, tool calling, and desktop automation.

parallel_matrix_formatter

RUBY

- Public Ruby utility for parallel matrix formatting.

vial-qmk fork

C / QMK

- Public Vial/QMK fork with more than 30 personal commits for custom split-keyboard firmware.

dockerized-agent and local-mcp-bridge

DEVELOPER TOOLS

- Public tooling for containerized agents and local Model Context Protocol integration.

◆ **Education and certificates**

Master's Degree in Computer Science

National Technical University “Kharkiv Polytechnic Institute”

Speciality: Telecommunication Systems Networks, 2008.

Bachelor's Degree in Computer Science

National Technical University “Kharkiv Polytechnic Institute”

Speciality: Telecommunication Systems Networks, 2006.

Longevity Researcher

Stanford Medicine, Department of Genetics, AI Longevity Lab

Issued 27 February 2026.

Supervised Machine Learning: Regression and Classification

DeepLearning.AI / Stanford University, Coursera

Verified 17 August 2023.

Anthropic certificates

Claude 101 · Claude Code in Action · Introduction to MCP · AI Fluency · Claude with Anthropic API · Introduction to Agent Skills

Anthropic / SkillJar, 2026.

◆ **Languages**

English: B2 (upper-intermediate) **Ukrainian:** native