# Ilya Sorokin

Software Engineer and Technologist

Vancouver, British Columbia, Canada

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## SUMMARY

Software Engineer with a quantum physics background (MIPT) and nearly 20 years of experience — from scientific computing in Fortran/C++ to building distributed systems, AI platforms, and enterprise software for companies like Amazon, Schlumberger, and TC Energy.

## EDUCATION

**PhD program, Theoretical and Mathematical Physics — all coursework and exams completed**
Moscow Institute of Physics and Technology (MIPT)
2005-2008

**Master of Science (MS), Applied Physics and Mathematics**
Moscow Institute of Physics and Technology (MIPT)
2003-2005

**Bachelor of Science (BS), Applied Physics and Mathematics**
Moscow Institute of Physics and Technology (MIPT)
1999-2003

**Languages:** English (Full Professional), Russian (Native)

## TECHNICAL SKILLS

**Languages:** C#, Scala, Python, Java, TypeScript/React, Haskell, R, C++, Matlab

**Methodologies:** Agile, TDD, DDD, SOLID, Microservices, CQRS, Event Sourcing

**Data Science:** numpy, scipy, pandas, scikit-learn, Spark, matplotlib

**Cloud:** AWS, Azure, GCP, Docker, Kubernetes, Bare Metal

## CERTIFICATIONS

Parallel programming | Functional Program Design in Scala | Functional Programming Principles in Scala | Introduction to Functional Programming | Scalable Machine Learning | Artificial Intelligence | Pattern Discovery in Data Mining | Machine Learning | R Programming

## PROFESSIONAL ENGAGEMENTS

**Digital Twins** — Ecosystem of tools for automation and digital twin development across industries

**iLiveMyLife.io** — AI-native knowledge graph — personal second brain and team messenger in one, with AI agents as first-class participants via MCP, SDK and plugin system.

**Meson Capital Management** — Built multi-broker account management for a market-neutral algorithmic hedge fund across its prime brokers JPMorgan, Goldman Sachs and Bank of America — daily portfolio rebalancing, short-borrow automation and order generation (Python, AWS).

**Schlumberger** — Maintained and enhanced Merak petroleum economics suite (C++/MFC) — enterprise software for oil & gas project management and financial modeling used by major operators globally.

**Teck Resources Limited** — 2 years contract as a key developer on enterprise Environmental Health & Safety (EHS) management system for Teck's international mining operations across Canada, USA, Chile, and Peru (C#, ASP.NET MVC, SQL Server, LLBLGen Pro, Ninject)

**TC Energy Corporation** — Led frontend development of digital twin pipeline platform with predictive analytics for TC Energy's 93,000+ km natural gas and crude oil pipeline network — superior delivery won contract expansions over competing vendors (Angular, TypeScript, AWS)

**Amazon** — Contract role on 3-engineer team that deprecated critical legacy Perl library across Amazon's e-commerce platform, analyzing high-volume production traffic, coordinating with multiple engineering teams, and executing zero-downtime migration across international systems

**EA Sports (Electronic Arts)** — Redesigned Asset Explorer (C#/WPF) with multi-repository integration and developed Python data pipelines supporting production of FIFA, NHL and other EA Sports franchises.

**Gentherm Incorporated** — DevOps Contractor at Gentherm Inc. (NASDAQ: THRM, 14K employees) — built Azure DevOps infrastructure (Docker, CI/CD, Event Hubs, IoT Hub) for enterprise IoT climate control platform serving major automotive OEMs

**SchoolStatus** — Cross-platform mobile messaging app for K-12 schools (Flutter, iOS/Android) with real-time chat, voice calls, and media sharing

**TrustedDispatch** — Logistics and transportation dispatch system

**Land Solutions** — Key developer on LandTraxx web platform for Land Solutions, enabling real-time management of land acquisition projects across multiple energy infrastructure developments in Western Canada (React, C#/.NET, SQL Server)

**Canadian Cattlemen's Association (CCA)** — Created stakeholder connectivity and industry data management platform for Canada's national beef cattle association (React/C#), serving 60,000+ producers

**Health Quality Council of Alberta (HQCA)** — Developed healthcare quality analytics platforms for Health Quality Council of Alberta using React and JavaScript, enabling data-driven policy decisions across Alberta's healthcare system

**Rostelecom** — Maintained mission-critical Intranet portal and developed internal applications supporting daily operations of Rostelecom (NYSE: ROS), Russia's largest telecommunications provider operating across 11 time zones

**Arcurve Inc.** — Contract software engineer on enterprise projects of varying scale for energy, mining, and financial sector clients using C#, ASP.NET MVC, WPF, and SQL Server

> **WordSteps.com** — Co-founded and scaled language learning platform to 200K+ users in 10 countries — full-stack (PHP/MySQL/AWS), team management, and cross-platform reach via PWA (built solo), native mobile, desktop, and browser extensions.

> **University of Calgary, Faculty of Medicine** — Developed secure exam management desktop application (C#/WPF) for the medical faculty — full-screen lockdown mode preventing students from accessing internet or other applications during tests, with staff-only exit controls and integrated exam/quiz delivery system

> **RapidSteps.com** — Co-founded multilingual blogging and language learning community (200K+ users, 2K+ daily visitors) with WordSteps integration — shut down due to lack of monetization (PHP, MySQL, Memcached)

> **BasicNeeds.me** — E-commerce platform automating access to basic needs for underserved communities

> **Scanomatiq** — High-definition 3D streaming platform for AR/VR applications

## DETAILED PROJECT DESCRIPTIONS

### Digital Twins

**Founder & CEO** (09/2017 — Present)

Technology consulting and custom software development company. Building digital twin solutions, automation tools, and AI-powered platforms for clients across energy, agriculture, healthcare, and logistics.

**Key areas:**
- Full-cycle software delivery: product vision, architecture, development, deployment, and ongoing support
- Conceived and building an ecosystem of products: knowledge graph platform (iLiveMyLife), e-commerce (BasicNeeds), 3D streaming (Scanomatiq), IoT digitization (webcam-as-a-node with AI-driven reactions), robotics community, payment automation systems, and a project accelerator for entrepreneur communities
- Built AI digital twins: a "talk to my clone" chat on a person's profile or a product page, powered by Lifebot over the owner's knowledge graph. The owner trains the clone simply by granting it access to graph nodes (resume, projects, documents), with privacy rules on what it may disclose; the same embeddable twin is being added to product landing pages to answer questions about the product from its graph.
- Designed and built the entire infrastructure: Azure, AWS, Kubernetes, CI/CD pipelines
- Assembling distributed teams for each product — hiring globally, mentoring individual interns, and supervising a student cohort from BCIT (British Columbia Institute of Technology)
- Driving adoption of AI and automation across client organizations

**iLiveMyLife.io**

**Founder & Lead Developer** (10/2019 — Present)

An AI-native knowledge graph that works as your second brain and your team's shared workspace at the same time — and as a substrate AI agents read, write, and extend. Started as my own daily-driver for life management, projects, and notes; opened up to teams when collaboration was needed; turned into an open AI-agent platform when MCP made that possible. Every node (projects, tasks, notes, documents, contracts) is also a chat channel that teams can be invited into, with fine-grained ACL through tags like `private`, `wallet`, and `kyc`. AI agents have first-class read/write access to the entire graph via MCP, and Lifebot — the built-in AI — can author and execute programmable contracts inside the graph, turning natural-language requests into running workflows. Built from day one for the agent era, while Slack and Teams retrofit AI onto chat-and-channels.

**Key achievements:**
- Designed and built full-stack platform from scratch on a CQRS architecture: MySQL writes (commands), MongoDB read-side projections (views), with CDC (change-data-capture) reliably streaming every MySQL transaction into Apache Kafka — the event bus that fans changes out to projection workers; Java REST API gateway, Node.js GraphQL layer for public clients, React/TypeScript frontend
- Implemented real-time collaboration with WebSocket subscriptions — every node is its own messenger channel, invitable to team members
- Built AI assistant (Lifebot) embedded in every node — context-aware responses using conversation history, graph structure, and node metadata; can author and execute programmable contracts (the "AI writes and runs the workflow" pattern)
- Designed a fine-grained ACL system with semantic tags (`private`, `wallet`, `kyc`, etc.) — node-level access control that propagates along the graph
- Published SDK (`@ilivemylife/graph-sdk`, on npm) and a cross-platform CLI tool (`ilml`), both in TypeScript, for programmatic and shell-level access
- Built an MCP (Model Context Protocol) server — AI agents (Claude Code, ChatGPT, Cursor, and custom ones) operate the graph through one standard interface: full CRUD on nodes (read, edit, move, archive, plus edit-history inspection), messaging inside any node, content + message search, and activity awareness — agents can read the user's recent visits and in-app/push notification feeds to figure out what changed and what's worth reading next
- Designed a plugin system on top of MCP: third-party npm packages extend agent capabilities (example: `ilml-plugin-linkedin` — Puppeteer-based LinkedIn data ownership toolkit)
- Self-hosted on bare metal with self-managed Kubernetes cluster, CI/CD pipelines, and Docker containers — full ownership of infrastructure without cloud vendor dependency

**Tech stack:** React, TypeScript, Java, Node.js, GraphQL (Apollo), MySQL + MongoDB (CQRS write/read), Apache Kafka, CDC (change-data-capture), WebSocket, Docker, Kubernetes, MCP (Model Context Protocol), OpenAI / Anthropic Claude / Google AI APIs

### Meson Capital Management

Integrated account management for clients across three brokers: JPM, Goldman Sachs, and Bank of America. Each broker may have several client accounts, requiring daily portfolio rebalancing done separately for each broker and the accounts within that broker. It involved aggregating how many shares to request from the broker for short positions, sending that request, processing the response, and redistributing it back to accounts (the broker may be able to lend fewer shares than requested), forming a complete list of orders for each broker and account that need to be executed and sent for execution.

Additionally, various tasks such as sending repeat loan requests, having the option to send 'slow' loan requests for personal analysis and approval by people at the broker, and submitting any outstanding orders for execution.

Other DevOps tasks included ensuring that Amazon Step Functions ran in custom Docker instances or were deployed to the cloud, S3 backup of certain data for analytics, a CLI library for analytics comparing how these brokers stack up against each other, automatic portfolio data display in Google Sheets for analysis, and other small tasks.

### Schlumberger

Worked at **Schlumberger**, the world's largest oilfield services company (100B+ market cap), serving major oil & gas operators globally. Contributed to **Merak**, Schlumberger's flagship enterprise petroleum economics and project management software suite used throughout the industry for financial modeling, reserves evaluation, and project planning.

**Technical Stack:** C++, MFC (Microsoft Foundation Classes), complex financial modeling algorithms, multi-module desktop application architecture for Windows.

**Key Contributions:** Maintained and enhanced critical modules within the suite, including rig management systems, financial forecasting tools, equity tracking across project lifecycle phases, and production modeling components. Worked with large-scale legacy codebase serving major oil & gas operators globally.

**Teck Resources Limited**

**Senior Software Engineer / Key Developer** (Contract, ~2 years)

**Company Context:**
Teck Resources Limited — Canadian multinational mining and mineral development company, one of the world's largest producers of metallurgical coal and a diversified producer of copper, zinc, and specialty metals (TSX/NYSE: TECK, 26,000+ employees, operations across Canada, USA, Chile, and Peru).

**Project: Environmental Health & Safety (EHS) Management System**

Served as key developer on enterprise-wide EHS platform for Teck's international mining operations, enabling comprehensive safety incident tracking, environmental compliance monitoring, and regulatory reporting across multiple mine sites.

**Core Responsibilities:**

— Full-stack development of critical EHS features using ASP.NET MVC architecture

— Database design and optimization for high-volume operational data (SQL Server)

— Implementation of complex domain models for safety incidents, environmental monitoring, and compliance workflows

— Integration of LLBLGen Pro ORM for robust data access layer

— Dependency injection architecture using Ninject for maintainable codebase

— Development of reporting modules for regulatory compliance and management dashboards

**Tech Stack:** C#, ASP.NET MVC, SQL Server, LLBLGen Pro, Ninject, JavaScript, HTML/CSS, IIS

**TC Energy Corporation**

**Senior Software Engineer / Frontend Team Lead** (Contract)

**Company Context:**
TC Energy Corporation — North American Fortune 500 energy infrastructure leader operating 93,000+ km of natural gas and crude oil pipelines across Canada, US, and Mexico (TSX/NYSE: TRP, 7,000+ employees).

**Project: Digital Twin Pipeline Infrastructure Portal**

Led frontend development of web-based digital twin platform providing real-time monitoring and predictive analytics for TC Energy's pipeline network.

**Key Contributions:**

— **Technical Leadership**: Led frontend team using **Angular** framework with JavaScript/TypeScript, establishing architectural patterns and best practices

— **Predictive Analytics Dashboard**: Built interactive dashboards with real-time and predictive analytics for temperature and pressure monitoring across pipeline segments

— **Multi-Role Portal**: Developed role-based interfaces for operations staff, administrators, and executive management

— **Legacy Modernization**: Refactored legacy codebase, updated dependencies, and migrated to current Angular versions

**Impact:**

Superior code quality and delivery enabled our subcontracting team to consistently outperform competing vendors. Success led to expanded contract scope — TC Energy increased our team size while reducing contractors from competing organizations.

**Tech Stack:** Angular, JavaScript/TypeScript, AWS, predictive analytics visualization, real-time dashboards, RBAC

**Amazon**

**Senior Software Engineer / Contractor** (Contract)

**Project: Legacy Perl Library Deprecation for E-Commerce Platform**

Part of a 3-engineer team responsible for deprecating a critical legacy Perl library used across multiple engineering teams supporting Amazon's core e-commerce platform, handling massive traffic volumes across multiple countries.

**Key Responsibilities:**

— **Traffic Analysis**: Analyzed high-volume production traffic to identify URLs associated with the legacy library across different geographic regions and services

— **Dependency Mapping**: Reverse-engineered library usage to determine which modules were called by which engineering departments, creating comprehensive dependency maps

— **Cross-Team Coordination**: Collaborated with multiple engineering teams to develop and coordinate migration strategies, negotiating timelines and alternative solutions

— **Migration Planning**: Designed phased traffic redirection plans across multiple routing systems, each with unique technical requirements and constraints

— **Code Analysis**: Developed methods to identify entry point functions in the library codebase, cataloging all starting modules for systematic deprecation

— **Risk Mitigation**: Executed gradual deprecation process in coordination with library consumers, ensuring zero disruption to production traffic where any error could result in significant business impact

— **High-Stakes Execution**: Managed deprecation with extreme attention to detail given the financial implications of potential errors in Amazon's core e-commerce flows

**Impact**: Successfully deprecated critical legacy infrastructure without service disruptions, enabling platform modernization while maintaining business continuity across high-traffic, multi-country operations.

**Tech Stack**: Perl, traffic analysis tools, multiple routing systems, distributed systems

### EA Sports (Electronic Arts)

Worked in the Frameworks department creating tools for artists working on games such as FIFA, NHL, and others. Primary technologies: C# and WPF.

**Key Achievement - Asset Explorer Redesign:**
Completely rewrote Asset Explorer with a new architecture. This application integrated files and assets for games from different game components and various data repository types into a single convenient interface. The tool helped artists and developers:
— View the complete picture of all created assets
— Launch their programs for each asset
— Manage asset versioning

**Data Pipeline Development:**
Developed data pipelines primarily in Python (and Flask) to transform large volumes of data, supporting the production workflow for multiple game titles.

### Gentherm Incorporated

**Software Engineer / DevOps Contractor**

Gentherm is a global automotive thermal management technology leader serving major OEMs worldwide, publicly traded on NASDAQ (THRM), with 14,000+ employees across 30+ facilities in North America, Europe, and Asia.

**Project:** IoT-enabled predictive climate control system using Raspberry Pi devices connected to vehicle CAN bus, collecting real-time telemetry and learning driver/passenger preferences to automatically adjust cabin comfort.

**Key Contributions:**
— Architected and deployed complete DevOps infrastructure on Azure Cloud (Docker, CI/CD pipelines)
— Built event streaming architecture for real-time vehicle telemetry ingestion and processing
— Contributed to client web application (React) and administrative portal development
— Configured data access infrastructure for data science team to analyze user behavior and develop ML models

**Tech Stack:** Docker, Azure Cloud (IoT Hub, Event Hubs, Functions), React, Raspberry Pi, CAN bus integration, event streaming, CI/CD automation

### SchoolStatus

**Senior Software Engineer** (Contract)

Developed mobile messaging application for K-12 schools, facilitating communication between students, parents, and school staff.

**Platform:** Cross-platform mobile application using Flutter framework, deployed to both iOS App Store and Google Play Store.

**Mobile Development:**
— Implemented real-time messaging functionality supporting text, voice calls, and media sharing
— Integrated user authentication and role-based access control for different user types (students, parents, staff)
— Built media upload/download features for images and file attachments
— Integrated backend API for data synchronization and real-time updates
— Implemented push notification handling for iOS and Android platforms
— Developed WebSocket client integration for real-time message delivery

**Key Features Delivered:**
— Real-time one-on-one and group messaging
— Voice calling functionality
— Image and file sharing capabilities
— User presence and read receipts
— Message history and search
— Cross-platform synchronization

**Impact:** Enabled seamless communication within school communities, improving parent-teacher engagement and student connectivity.

**Tech Stack:** Flutter, REST API integration, WebSockets, push notifications (APNs/FCM), mobile deployment (iOS/Android)

### TrustedDispatch

Designed and implemented a dispatch system to streamline logistics and transportation management

### Land Solutions

**Company Context:**
Land Solutions is a leading Canadian land services company specializing in land acquisition and stakeholder engagement for energy infrastructure projects across Western Canada, managing complex negotiations for pipelines, power transmission, and resource development.

**Project Overview:**
LandTraxx is Land Solutions' proprietary web-based platform serving as the central hub for land acquisition project management. The system enables tracking of land parcels, stakeholder relationships, negotiation progress, agreement documentation, and provides real-time project visibility across multiple concurrent energy infrastructure projects for agents, analysts, project managers, and clients.

**Role:**
Key developer on the LandTraxx platform, contributing to core features across the full stack.

**Tech Stack:** React, C#/.NET, SQL Server

### Canadian Cattlemen's Association (CCA)

Developed application for Canada's national cattle association, enhancing stakeholder connectivity and data management across the industry.

**Company Context:**
The Canadian Cattlemen's Association (CCA) is the national voice for Canada's beef cattle industry, representing over 60,000 beef farms and feedlots. The organization coordinates policy development, market access, and industry advocacy while managing complex stakeholder data and communications.

**Technical Stack:**
- **Frontend:** React — modern component-based UI for responsive web applications
- **Backend:** C# with ASP.NET Core — robust server-side logic and API development

**Project Scope:**
- Stakeholder management systems
- Data aggregation and reporting tools
- Industry communication platforms
- Enhanced connectivity between producers, processors, and association members

### Health Quality Council of Alberta (HQCA)

Developed healthcare quality analytics platforms for Health Quality Council of Alberta (HQCA), an independent organization focused on improving healthcare quality across Alberta, Canada.

**Key Responsibilities:**
— Developed frontend solutions using React with functional programming paradigm (pure functions, immutability, higher-order components)
— Developed API integrations for backend data systems
— Created interactive tools for presenting healthcare quality metrics and patient satisfaction data
— Developed reporting systems to support evidence-based policy development
— Implemented data presentation layers for tracking treatment outcomes across Alberta healthcare facilities

**Impact:**
— Enabled data-driven decision-making for healthcare policymakers
— Provided transparent reporting on healthcare service quality across the province
— Supported continuous improvement initiatives in Alberta's healthcare system

### Rostelecom

**Software Engineer, Rostelecom** (2 years)

Rostelecom (NYSE: ROS) — Russia's largest telecommunications operator with operations spanning 11 time zones across the country, serving millions of customers with fixed-line, mobile, broadband, and digital services.

**Key Responsibilities:**

— Ensured continuous operation and availability of corporate Intranet portal serving thousands of employees across multiple time zones

— Developed and maintained internal applications supporting critical business operations and cross-departmental workflows

— Implemented solutions for enterprise-wide communication and collaboration infrastructure

— Provided technical support and enhancements for existing corporate systems to meet evolving business requirements

— Collaborated with stakeholders across different regions to understand requirements and deliver reliable software solutions

**Tech Stack:** C#, PHP, SQL Server, web development technologies

**Impact:** Maintained high availability of mission-critical internal systems supporting daily operations of one of Russia's largest telecommunications infrastructure providers.

**Arcurve Inc.**

**Software Engineer / Consultant** (Contract, Oct 2010 - Mar 2014)

Arcurve Inc. — Canadian software consulting firm specializing in enterprise solutions for energy, finance, mining, and healthcare sectors.

Worked as contract developer on projects of varying scale:

**Major Projects:**
— Environmental Health & Safety Management System for international mining company (C#, ASP.NET MVC, SQL Server, LLBLGen, Ninject)
— Financial software for oil & gas industry (C#, WPF, Oracle, SQL Server, C++)

**Small & Medium Projects:**
— Multiple short-term projects using various technologies (C#, ASP.NET, WPF, Silverlight, Java)

**Tech Stack:** C#, ASP.NET MVC, WPF, Silverlight, SQL Server, Oracle, Java, LLBLGen, Ninject

**WordSteps.com**

**Co-Founder & Full-Stack Developer** (Jun 2009 — Present)

Built and scaled an innovative language learning platform from concept to 200K+ registered users across almost 10 countries. Still live in production today, 15+ years later — the original full stack continues to serve users.

**Core Platform:**
— Architected and developed the entire web application using PHP, JavaScript, MySQL, running on AWS infrastructure (Linux, Apache, Nginx, Memcache, Sphinx)
— Created a comprehensive vocabulary learning ecosystem allowing users to build custom thematic dictionaries with words and translations
— Developed 10+ interactive learning modes including word-to-translation matching, reverse translation exercises, image-based visual learning exercises, and audio-based learning with professional voice-over recordings
— Implemented intelligent spaced repetition algorithms for optimized word retention and reminder scheduling

**Commercial Content:**
— Produced premium vocabulary courses including "2000 Most Common English Words" and other thematic collections
— User-generated content platform resulted in over 10,000 thematic dictionaries created by 200K+ users covering diverse topics and languages

**Cross-Platform Tools:**
— **Browser Extension Translator**: Chrome plugin enabling users to click any word on any website to see instant translations and add words directly to their learning dictionaries
— **Desktop Application**: Developed WPF-based Windows translator with C++ integration, providing system-wide instant translation via hotkeys or Ctrl+Click, working seamlessly within Windows interface
— **Native Mobile Applications**: Led development of native apps for Android and Samsung Bada OS platforms (outsourced team coordinated by me)
— **Progressive Web App (PWA)**: Built end-to-end myself — installable, offline-capable mobile experience reusing the core learning engine, no external developers involved

**Technical Leadership:**
— Handled complete DevOps infrastructure on Amazon AWS
— Managed and coordinated remote contractor team via Upwork for feature development
— Implemented multi-language interface localization supporting diverse global user base

**Tech Stack**: PHP, MySQL, JavaScript, C#, WPF, C++, AWS (EC2, S3), Linux, Apache, Nginx, Memcache, Sphinx, Android SDK, PWA (Service Workers, Web App Manifest)

### University of Calgary, Faculty of Medicine

**Company Context:**
Cumming School of Medicine at the University of Calgary — one of Canada's leading medical faculties, pioneering digital transformation of medical education.

**Role:**
Developer on a small internal tools team supporting multiple digital initiatives across the faculty.

**Key Projects:**
- Secure exam management desktop application (C#/WPF) — full-screen lockdown preventing internet access and cheating, staff-only exit controls, integrated exam and quiz delivery
- PHP web tools for faculty administration
- Explored virtual learning environments using Second Life platform

**Tech Stack:** C#, WPF, PHP, MySQL

### RapidSteps.com

**Co-founder & Lead Developer**

RapidSteps.com was a multilingual blogging and language learning community platform with 200K+ registered users and 2,000+ daily new visitors at peak.

**Platform Concept:**
A Habr-style blogging system where users could create topical blogs and publish articles about language learning — grammar guides, vocabulary tips, cultural insights, creative language exercises. The platform supported multiple interface languages and covered dozens of target languages. Thousands of blogs and articles were created by the community, forming a massive knowledge base for language learners.

**Key Feature — WordSteps Integration:**
Users could select unfamiliar words directly from articles and save them to personal vocabulary lists on WordSteps.com for spaced repetition learning. This created a seamless read → collect → memorize pipeline between the two platforms.

**Scale & Impact:**
- 200,000+ registered users across multiple countries
- 2,000+ new daily visitors
- Thousands of community-created blogs and articles
- Multi-language interface and content

**Outcome:**
Project was shut down due to lack of monetization despite strong organic growth and engagement.

**Tech Stack:** PHP, MySQL, Memcached, self-hosted bare metal servers (shared infrastructure with WordSteps.com)

**BasicNeeds.me**

**Founder & Full-Stack Developer** (2022 — Present, in active development)

E-commerce platform and project marketplace built as part of the iLiveMyLife ecosystem — sharing user accounts, authentication, and the knowledge graph infrastructure.

**Vision:**
A product card is a project node in the knowledge graph. Projects managed in iLiveMyLife can be published as commercial offerings on BasicNeeds — attracting users, building communities, and enabling token-based investment in projects. This bridges project management with commerce: develop a project in the graph, then promote and monetize it through the storefront.

**Social mission:** Automating access to basic needs for underserved communities, including 1.5 billion people without access to traditional banking who still have smartphones. Designed for cross-border commerce in developing countries without native internet fiat currency.

**Current state:**
- Back-office: project management and product catalog administration
- Storefront: customer-facing shop with product browsing and ordering
- Full SSO integration with iLiveMyLife — single user account across the ecosystem
- Platform continues to be actively developed

**Key technical highlights:**
- Product cards are graph nodes — leveraging reactive graph DB for dynamic catalog management
- AI-powered product creation: Lifebot generates virtual products on demand from natural language requests
- Integrated iLiveMyLife chat allows customers to ask questions about products directly, with AI-powered responses
- React frontend with responsive design, Azure Functions serverless backend

**Tech stack:** React, TypeScript, Azure Functions, Azure Blob Storage, iLiveMyLife Graph SDK, Lifebot AI, Stripe

**Scanomatiq**

**Co-Founder & Lead Developer**

A High-Definition 3D Streaming Platform and an API for Mobile and Web-based Augmented, Virtual and Mixed Reality Applications.

**Key highlights:**
- Built 3D streaming player for real-time visualization of high-definition 3D models in browser and mobile
- Developed REST API for managing and serving compressed 3D content
- Integrated with iLiveMyLife knowledge graph as a storage backend for compressed 3D information inside a reactive graph database
- React-based UI framework for interactive 3D scene management

**Tech stack:** React, WebGL, Three.js, Node.js, REST API, iLiveMyLife Graph DB