

Andrew Panfilov

Engineering Manager | Software Architect | AI/ML Systems & Distributed Architecture

About

📍 Mislata Valencia
Valencia 46920 ES

✉️ andrew@dzer6.com

🔗 dzer6

🌐 andrewpanfilov

Languages

English (Full professional proficiency)

Ukrainian (Full professional proficiency)

Russian (Native)

Summary

Engineering leader with 21+ years of experience architecting scalable, distributed systems and managing high-performing technical teams. Proven track record in establishing architectural standards, leading engineering managers and architects, and driving technical excellence across organizations. Deep expertise in cloud platforms (AWS, GCP), domain-driven design, microservices architecture, and AI/ML integration including LLMs and RAG pipelines. Successfully built and mentored cross-functional teams, implemented architectural governance processes, and delivered large-scale systems for fintech, e-commerce, and SaaS companies. Passionate about fostering collaborative team cultures while maintaining rigorous quality standards and architectural best practices.

Experience

Kingpin.ai

08/2025 - 12/2025

Head of Engineering

Fashion retail startup focused on AI-driven solutions for the fashion industry.

- Established and optimized development processes, transitioning the team from chaotic scrumban to structured scrum methodology, resulting in improved delivery predictability and team efficiency.
- Conducted comprehensive team productivity analysis, identifying top and low performers, and addressed collaboration challenges across different engagement models (in-house developers, hourly contractors, and outsourcing partners).
- Recruited and onboarded critical team members including software developers and a Business Analyst/Product Owner/Product Manager to establish a robust product backlog and enable effective scrum processes.
- Designed and architected new product for market launch, including comprehensive customer system integrations with CRM and ERP platforms.
- Created detailed integration specifications defining data flows, mappings, happy path scenarios, and error handling procedures to ensure clear expectation management with customer systems.
- Led people management initiatives by monitoring team morale, motivation, and communication patterns, while clearly articulating the company's roadmap, technology stack, and strategic direction.
- Produced weekly delivery metrics reporting to track organizational delivery status and identify areas for improvement.
- Managed engineering budget, conducted cost analysis, and optimized spending through strategic vendor engagement for non-core business functions.
- Engaged third-party vendors for specialized solutions including Sales Through Reporting, Demand Forecasting, and custom reporting tools, allowing the company to focus on core competencies.
- Selected and implemented Low-Code/No-Code integration platforms to accelerate development and reduce technical overhead.
- Drove adoption of AI-assisted programming practices across the engineering team, enhancing developer productivity and code quality.
- Managed technical debt lifecycle, implemented Incident Management processes, and established Observability practices to ensure system reliability.
- Led and executed cloud platform migration from AWS to GCP, including infrastructure redesign and deployment optimization.

Sira Sight AI

05/2025 - 08/2025

Founding Engineer

Clinical research technology startup providing AI-powered solutions for clinical site cost benchmarking, budgeting, negotiation and management serving Clinical Research Sites, CROs, and Pharmaceutical Sponsors.

- Served as the sole engineer responsible for building the complete MVP from scratch, including frontend, backend, and infrastructure components.
- Leveraged AI Coding Assistants to accelerate development velocity and deliver the full product within a 3-month timeframe.
- Designed and implemented the overall system architecture as well as individual component architectures, ensuring scalability and maintainability for a clinical trials data platform.

- Deployed the complete product to AWS, managing infrastructure setup, configuration, and production deployment.
- Built a proprietary AI-powered data extraction engine capable of intelligently ingesting and analyzing both structured and unstructured Clinical Trial Agreements (CTAs) and clinical trial budgets from Excel and PDF files.
- Implemented data cleansing and standardization pipeline with proprietary global dictionaries for mapping historical budget records and market benchmark data.
- Created AI-driven Schedule of Events generation from clinical trial protocols and budget prediction capabilities using generative AI for upcoming trials.

Mitrallex

04/2025 - 05/2025

Technical Consultant

Ukrainian LegalTech startup developing an intelligent chatbot for legal consultations based on Ukrainian legislation.

- Built the Retrieval component for a RAG (Retrieval-Augmented Generation) system to enable accurate legal information retrieval and consultation capabilities.
- Developed an intelligent chatbot system capable of providing legal consultations on topics related to Ukrainian legislation.
- Designed and implemented a document processing pipeline to handle legal acts collected via web crawler, ensuring proper structure and indexing.
- Implemented an optimized chunking strategy for vector search, enabling efficient retrieval of relevant legal information from large legislative document collections.

Techstack / Optimality

08/2024 - 04/2025

Software Architect, Engineering Manager

Led architecture and engineering management efforts for a smart business process automation system serving major clients in the oil and gas industry in the US (Chevron) and Japan (Chiyoda Corp).

- Designed a multitenant architecture utilizing asynchronous CQRS patterns, BPM functionality, a data processing pipeline with LLM, and an intelligent chatbot.
- Established and optimized delivery processes, introduced scrum methodologies, and guided teams in adopting structured workflows.
- Improved backlog quality by backlog analyzing, identifying gaps, and mentoring teams to create detailed, actionable backlog items.
- Conducted Buy vs Build analyses for subsystems, accounting for the project's technological complexity and client-specific requirements.
- Mentored team members in corporate communication, expectation management, and cross-team coordination across three distributed teams.
- Facilitated collaboration among geographically distributed teams in Poland, Ukraine, Vietnam, Indonesia, and the US, ensuring seamless communication and alignment.
- Directed the infrastructure team, ensuring their contributions aligned with project goals and deadlines.

Playtika

03/2024 - 08/2024

R&D Team Lead

Led the R&D team to optimize software delivery processes and implement Scrum methodologies across projects, enhancing both efficiency and product quality.

- Managed a diverse team comprising 5 client-side programmers, 5 server-side programmers, 3 testers, and 1 Product Owner, with 9 individuals directly under my supervision.
- Built and maintained trusting relationships with team members, including those working in the Kyiv and Vinnytsia offices during the war, ensuring their psychological well-being and fostering a supportive work environment.
- Implemented people-management strategies to support team members working under challenging conditions, maintaining high morale and engagement.
- Facilitated effective communication and collaboration within the team, enabling seamless coordination between client-side and server-side development efforts.
- Empowered team members to take ownership and accountability for their work, promoting a culture of responsibility and initiative.
- Supported the Product Owner in maximizing their effectiveness within an agile framework, ensuring clear and prioritized product backlogs.
- Guided Scrum teams in practicing Scrum principles and fostering continuous improvement, enhancing overall team performance.
- Developed comprehensive mitigation strategy focusing on static code analysis of C++ codebase and augmenting test coverage for high-risk components, aiming to reduce game crashes.

Stealth Startup

01/2024 - 12/2024

Founding Engineer

Platform for hourly car rental services enabling flexible vehicle access for consumers.

- Served as founding engineer with primary focus on backend development, designing the entire system architecture from the ground up.

- Led the development process alongside another founding engineer, managing requirements gathering, implementation, and stakeholder communication.
- Built single-page web application using JVM/Clojure backend and Vue.js frontend, leveraging WebSockets for real-time communication.
- Deployed and managed infrastructure on AWS using Terraform for infrastructure-as-code, utilizing PostgreSQL database and AWS Cognito for authentication.
- Integrated with SmartCar API to abstract vehicle management across different car manufacturers, enabling unified control interface.

Elevator Research Services

09/2022 - 01/2024

Chief Technology Officer

Conversational AI SaaS startup (chatbot tools for marketing research)

- As an early-stage startup CTO, my role encompassed a broad range of responsibilities to establish and advance our technological footprint in the SaaS and Conversational AI space. Key achievements include:
- Team Building & Leadership: Recruited and mentored a highly competent development team, fostering a culture of innovation and efficiency. My leadership approach involved close mentorship, ensuring team members were well-equipped with the necessary skills and knowledge to excel in their roles.
- AWS Cloud Cost Optimization: Implemented strategic solutions for cloud cost management, focusing on optimizing our AWS infrastructure. This involved careful planning and execution to balance performance with cost-effectiveness, ensuring maximum efficiency of our cloud resources.
- Architecting LLM Pipeline: Designed and built a comprehensive three-stage Large Language Model (LLM) pipeline, tailored to enhance our conversational AI capabilities. The stages included:
- Chatbot Dialogue Setup: Developed sophisticated prompt engineering techniques to set up engaging and effective chatbot conversations, ensuring a seamless interaction experience for users.
- Fieldwork with LLM: Managed the deployment of chatbots in real-world scenarios, where they interacted with respondents using advanced LLM techniques. This phase was crucial in gathering valuable insights and testing the effectiveness of our conversational AI in actual use cases.
- Data Analysis and Processing: Led the development of complex data analysis methods, including categorization, tagging, Personally Identifiable Information (PII) clearance, entity extraction, and sentiment detection. This stage was essential for deriving meaningful insights from chatbot interactions and continuously improving our AI models.

Synqrinus

06/2021 - 09/2022

Director Of Engineering

Marketing research agency.

- Achievements: I led a diverse team of software developers to build and optimise proprietary marketing research tools. I set up and led efficient processes to enable the team to operate with clear communication, accountability, and tracking. I focused on empowering my team and providing coaching and growth opportunities.
- Responsibilities: people management; composing high and low-level design of the software; code review; hiring new engineers; leading group of engineers; coaching and experience transferring.
- Technologies and tools: Clojure, ClojureScript, Java, Apache Camel, Postgres, Docker, AWS, Git, Github, JIRA.

Takeoff Technologies (Awarded as Technology Pioneer by World Economic Forum in 2020)

03/2018 - 06/2021

Senior Software Developer/Technical Lead/Engineering Lead/Software Architect

Takeoff Technologies – robotic micro-fulfilment centres.

- Initially, as a Senior Software Developer, I designed and implemented crucial components for the integration with robotic shelves and legacy ERP/WMS systems, and developed a stable and robust e-commerce system service contracts component. Later, as Technical Lead and Software Architect, I led the team responsible for MFCaaS-retailers integration, orchestrating business process automation, ETL components for third-party data processing, and adapting legacy ERP/WMS integration. As an Engineering Lead, I managed several teams working on assortment, replenishment, retailer integration, and warehouse inbound processes. My responsibilities spanned people management, software design, code reviews, technical documentation, and incident management in production environments.
- Technologies and tools: Clojure, ClojureScript, Java, Postgres, ArangoDB, CouchDB, Redis, OracleDB, Docker, Apache Camel, JSON, EDN, Git, Github, JIRA.

Zapflow

03/2017 - 02/2018

Senior Full Stack Software Developer

Deal Flow Power Tool for VC & PE.

- Responsibilities: programming; code review; coaching and experience transferring; requirement analysis, tasks breakdown and estimating.
- Technologies and tools: Clojure, Immutable, ClojureScript, Reagent, React, ReactBootstrap, HTML, JavaScript, SCSS, Datomic, AWS, Docker, JSON, EDN, Datalog, Git, Github, Trello, Youtrack, CircleCI.

Cogniance

08/2012 - 03/2017

Senior Software Developer/Lead Software Developer/Software Architect

My work spanned diverse projects, including developing a custom DWH and ETL for an advertising platform, contributing to a healthcare startup with a smart thermometer and mobile apps, creating a backup service for enterprises integrating with Dropbox and Box.com, and developing an advertising platform for engaging consumers through various media. My responsibilities included architecture design, leading development teams, and hands-on programming. I utilized technologies like Java, Spring Framework, Hibernate, and Hadoop, and managed databases. My role required skills in requirement analysis, technical documentation, and robust software development, showcasing my expertise in software architecture and development.

- Technologies and tools: Amazon EMR, Apache Tomcat, Box.com Client Lib, Cascading, Impala, Cascalog, Clojure, Docker, Docker Compose, Docker Machine, Docusign Client Lib, Dropbox Client Lib, Druid, Echosign Client Lib, Elasticsearch, Flywaydb, Git, H2, Hadoop, Hibernate, JPA, JSON, JUnit, Jackson, Java, Jenkins, Jira, Leiningen, Mockito, Mockito Git, MyBatis, MySQL, OAuth2, PostgreSQL, RabbitMQ, SQL, Solr, Sonar, Spring, Spring Boot, Spring Core, Spring Data, Stormpath, TeamCity, WADL, WSO2, XML, XSD.

Ciklum

01/2012 - 08/2012

Senior Software Developer

Poker, refactoring of legacy Poker game solution. Rewriting parts of existed poker servers.

- Responsibilities: requirement analysis and estimation; detail Design document writing; developing an application in Java; refactoring legacy code; collaborating with a 2-4-member software team; collaborating with a core team; continuous Integration adjustment; build process creating and adjustment.
- Technologies and tools: Playtech Poker Servers, Google Protobuf, Java, Groovy, XML, JSON, Black Box Testing, JUnit, Jenkins CI, Apache Maven, Apache Ant, Sonar, Nexus, SVN, Jira, Icescrum.

Topspin / Front Porch Digital (acquired by Oracle in 2014)

12/2010 - 12/2011

Senior Software Developer

I was instrumental in developing a web service for Front Porch Digital's DIVA, a large media storage solution. This web service, built on the WSO2 Carbon platform, was designed to support both SOAP (described with WSDL 1.1) and REST (described with WSDL 2.0) protocols, facilitating integration with a multitude of television software partners. My responsibilities included requirement analysis and estimation, writing high-level and low-level design documents, and developing the application in Java. I collaborated with a 4-member software team and the customer team, managed the continuous integration process, and created and adjusted the build process.

- Technologies and tools: WSO2 Carbon, OSGi, Apache Axis2, Spring Framework, SoapUI, REST, SOAP Java, Groovy, WSDL, XML, XSD, WADL, Jenkins CI, Apache Maven, Sonar, Nexus, MKS, SVN, Trac.

Exadel / John Hancock Investment Management

09/2010 - 12/2010

Software Developer

An Intranet application for mutual funds accounting based on Spring Framework, Hibernate, JSF, JBPM, Quartz with MS SQL database and Apache Tomcat as a servlet container.

- Responsibilities: bug fixing; analyzing custom logic requirement and providing DSL based high-level solution.
- Technologies and tools: JSF, Hibernate, Spring Framework, Apache Tomcat, JBPM, Quartz, Java, XML, JavaScript, HTML, Apache Maven, Sonar, SVN, Jira.

Nighterra

02/2004 - 09/2010

Software Developer

My responsibilities included implementing a release issue tool website, developing a web-based bank application for demonstrating test tool features, creating a tool for managing release rollouts, and developing a distributed service execution engine. Additionally, I refactored and developed new UI layers for an instant messenger, created a client inspector for a casino game application, developed a GIS system for warehouse goods management, and contributed to an Eclipse plugin for business process flow management.

- Technologies and tools: AWT, Apache ActiveMQ, Apache Ant, Apache Axis2, Apache Camel, Apache Maven, Apache Tomcat, Bugzilla, CVS, Castor, CookJS, CookSWT, CookXML, Derby, Dojo, Draw2D, Eclipse API, Excelsior Jet, Excelsior xFunction, FreeBSD, GEF, Geoserver, Geotools, Grails, Groovy, Hibernate, JDBC, JFace, JMS, JSP, JTS, JXTA, Jackrabbit, Java, JavaScript,

Education

Donetsk National Technical University
Bachelor Computer Science

09/2000 - 07/2004

Volunteer

Kyiv Clojure Users meetup

<https://web.archive.org/web/20220626031049/https://www.meetup.com/Kiev-Clojure-Users/>
01/2013 - 12/2017

Host

The Kyiv Clojure Users group is a public meetup group based in Kyiv, organized by Andrew Panfilov and another individual. It comprises 253 members who share an interest in Clojure, a modern, dynamic, and functional programming language. This group is open to all skill levels, from beginners to advanced programmers. The primary aim of the group is to bring together Clojure enthusiasts for knowledge sharing and exploring functional programming on the JVM. The group has hosted a number of events, indicating active participation and regular meetups among its members.

Publications

Podcast Episode (in Ukrainian)

02/2025

Youtube

A podcast about startup spirit, early-stage startups, the role of an architect, as well as society and cultural code.

A Polygon-Free Ray Tracer: Rendering Bicubic Bézier Surfaces in Clojure

03/2025

LinkedIn

This project is primarily educational and was undertaken simply because I enjoy exploring these techniques. This article describes a ray-tracing system implemented in Clojure that renders a scene without using any polygons. Instead, it uses smooth, mathematically defined Bézier patches combined with spatial data structures to achieve high visual fidelity.

How to build a vector embedding pipeline in Clojure with locally running LLM

08/2024

LinkedIn

"Beating the average" is important for those building a startup. The proper tooling and technologies are some of your non-market advantages. In 2001, Paul Graham wrote a blog post about how he achieved impressive results with the startup Viaweb. Over 20 years ago, Paul used the Lisp programming language in that startup. Today, Clojure is a nowadays Lisp. In this article, I explain how, by using Clojure and one of the most mature Java frameworks, you can build a pipeline for processing documents with the help of a locally running LLM.

Chatbot Prototype: Architectural Proposal

05/2024

LinkedIn

This article presents an example of an architectural proposal for creating an intelligent chatbot prototype with LLM. It can serve as useful learning material for those who have never written such documents, and for those who have written similar proposals, it may enrich their experience. In any case, I would be glad to hear readers' comments and discuss what should be added to or corrected in this document.

Let's write a simple microservice in Clojure

04/2024

LinkedIn

The article provides a comprehensive guide to creating a simple microservice in Clojure, emphasizing the language's capability to leverage the extensive Java ecosystem. By utilizing Clojure, developers can significantly reduce the amount of code and boilerplate, leading to more efficient development.

LLM pipeline for marketing research insights

01/2024

LinkedIn

Insights on Building a Conversational AI Pipeline for Marketing Research.

