

Alexey Pelykh

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👋 Hello there! I'm Alexey, and I'm a software industry fellow. The tech teams call upon me to crack perplexing issues with my full-stack expertise and vast generalist experience.

Software Architecture

Tech Leadership

Full-stack Development

Back-end Development

Cloud Infrastructure

Research & Development

Machine Learning

Generative AI

Recent Portfolio

- Yahoo!**
Yahoo Immersive ecosystem, Yahoo Sports PlayAR, Content Summarization.
- Private Investment Fund**
A knowledge bot for private investment fund powered by LLMs and advanced RAG.
- Genius Ventures**
Software development workflow for software agencies.

Core Expertise

Full-Stack Development 20 years	Software Architecture 19 years	Tech Leadership 12 years
C++ 20 years	Typescript 9 years	Python 7 years
Node.js 9 years	React 8 years	Odoo 7 years
NestJS 6 years	PyTorch 4 years	LangChain 2 years

Professional Experience

Senior Full-Stack Software Engineer

Yahoo! (Jan 2019 - Dec 2023)
Los Angeles, CA (remote)

- Co-developed an SDK for Yahoo's AR experiences.
- Built a 3D assets pipeline for AR authoring.
- Developed a method to stream UnrealEngine output to AR.
- Improved a rendering engine and a cloud-based rendering solution.
- Designed and developed software for Yahoo Sports PlayAR versions 1 and 2.

Software Engineering Consultant

Genius Ventures (Jul 2022 - Oct 2022)
Los Angeles, CA (remote)

- Reviewed and optimized Jira workflows to enhance issue tracking and management efficiency.
- Automated tasks and notifications in Jira, reducing errors and saving team time.
- Developed custom Jira reports and dashboards to improve project tracking and decision-making.
- Integrated Jira with other development tools to streamline processes.
- Conducted Jira training for team members, improving their efficiency by 30%.

Chief Technology Officer

Brainbean Apps (Jan 2015 - Mar 2019)
Estonia (hybrid)

- Grew the software engineering department from its original size by 500%.
- Mentored the engineering team, enhancing process efficiency by 20%.
- Developed a career roadmap strategy, increasing employee retention by 15%.
- Reduced onboarding time for new hires by 50%.
- Built a robust technical infrastructure to underpin operations.
- Crafted and executed a technical strategy that aligns with the organization's business objectives.
- Oversaw the recruitment and management of the engineering team.
- Provided technical leadership, influencing project direction and innovation.

- Secured system and data integrity through rigorous security practices.
- Established technical policies and maintenance protocols to ensure system longevity.
- Managed and nurtured relationships with key vendors and partners, ensuring mutual benefit.

Lead Mobile Software Engineer

OsmAND (Nov 2012 - May 2015)
Netherlands (remote)

- Directed the cross-platform initiative to launch OsmAnd on iOS, capturing a 40% larger user base.
- Boosted map rendering performance, enhancing user experience and raising customer retention by 25%.
- Enabled the release of an enhanced Android version of OsmAnd, featuring 3D rendering and terrain support, which boosted revenue.

Generalist Software Developer

Various companies (Jun 2004 - Oct 2012)

- Conducted a security audit of Android OS sources, eliminating "call-home" injections and unauthorized TLS certificates, enhancing system security.
- Designed a user-centric Android Home UI, increasing engagement with telecom operator partners' target audience.
- Integrated an OpenStreetMap-based navigation app with offline regional maps, boosting usability for telecom partners' customers.
- Developed a cross-platform inertial motion capture engine, accelerating development and protecting intellectual property by leveraging a System-On-Module platform.
- Adapted the Linux Kernel for a System-On-Module platform, delivering a stable and updatable system.
- Improved Linux Kernel TTY driver, increasing throughput and enhancing motion capture quality.
- Upgraded Unreal Engine 3's decal rendering, improving visual dynamics in shootouts without sacrificing performance.
- Implemented a "Local Realm" subsystem for an MMORPG with caching and prediction, significantly reducing network traffic.
- Created a sophisticated UI for an MMO, managing complex interactions and user interface challenges.
- Built an Inertial Motion Capture System compatible with Autodesk MotionBuilder, tapping into the cost-effective motion capture market.
- Developed a real-time Motion Capture/VR integration proof-of-concept, informing strategic product adjustments.
- Advanced a R&D project by developing a movement approximation algorithm for 5-fiber MoCap gloves, blending real-time motion capture with VR.
- Created a PlayStation 2 CPU emulator, allowing to research software loading efficiency.
- Developed specialized modeling and simulation software for dynamic systems with feedback, contributing to a significant inertial navigation project and aiding in a company acquisition.

Skills

Languages

C • C# • CSS • Embedded C++ • GraphQL • HTML • Java • JavaScript • Kotlin • Objective-C • Ruby • SQL • Swift • UnrealScript

Frameworks

Android SDK • Angular • Boost • Chrome • Django • Flutter • Flux • Jest • NativeScript • NestJS • Next.js • Qt • React Native • React.js • Redux • Scrapy • Selenium • Tailwind • Unity • Unity3D • Unreal Engine • Unreal Engine 3 • Unreal Engine 4 • iOS SDK

Libraries & APIs

API Development • Android API • Android OpenGL • Beautiful Soup • Chai • Chrome API • DirectX • FFmpeg • Facebook SDK • Mapbox API • Node.js • OpenGL • OpenGL ES • OpenStreetMap API • Puppeteer • REST APIs • React • React Redux • Redux Form • Redux-Saga • Slack API • Standard Template Library (STL) • Twitch API • Xamarin.Android • Xamarin.iOS

Tools

AWS SDK • Android NDK • Android Studio • Apache Maven • Atlassian • Auth0 • Autodesk FBX SDK • Babel • Bitbucket • Blender • CLion • CMake • Celery • Confluence • GCC • GIS • Git • GitHub • Gradle • Jenkins • Jira • MATLAB • MQTT • Microsoft Visual Studio • Mocha • NPM • Odoo • PyCharm • Pytest • SWIG • Subversion (SVN) • Travis CI • pylint

Paradigms

Agile Software Development • Continuous Integration (CI) • Data Science • DevOps • Lambda Architecture • Microservices • Object-oriented Programming (OOP) • REST • Reactive Programming • Serverless Architecture • Unit Testing

Platforms

ARCore • AWS IoT • AWS IoT Core • AWS Lambda • Amazon EC2 • Amazon Web Services (AWS) • Android • Android TV • Databricks • Docker • Embedded Linux • Firebase • Google Cloud Platform (GCP) • Kubernetes • Linux • MacOS • PlayStation • Visual Studio 2017 • Visual Studio Code (VS Code) • Windows • Windows Phone • Xamarin • iOS

Storage

Amazon DynamoDB • Amazon RDS • Amazon S3 (AWS S3) • Databricks • NoSQL • PostgreSQL • SQLite

Other

3D Rendering • Algorithms • Artificial Intelligence (AI) • Augmented Reality (AR) • Bots • CI/CD Pipelines • ChatGPT • Chatbots • Chromium • Data Analytics • Data Scraping • Device Firmware Updates (DFU) • Digital Elevation Models • Embedded Systems • Enterprise Resource Planning (ERP) • FastAPI • Firmware over the Air (FOTA) • Front-end Architecture • GL Transmission Format (glTF) • Generative Pre-trained Transformers (GPT) • Hugging Face • Infrastructure as Code (IaC) • Internet of Things (IoT) • JSON REST APIs • Lambda Functions • Language Models • Linux Device Driver • Linux Kernel Programming • Machine Learning • Multithreading • Natural Language Processing (NLP) • Natural Language Understanding (NLU) • OpenAI • OpenAI GPT-3 API • OpenAI GPT-4 API • Pinecone • Prompt Engineering • Pub/Sub • Push Notifications • Remote Team Leadership • Retrieval-augmented Generation (RAG) • Reverse Engineering • Satellite Images • Screwdriver • Software Development Lifecycle (SDLC) • TCP/IP • Team Mentoring • Technical Architecture • Telegram Bots • Vector Databases • Virtual Reality (VR) • Web Scraping • WebSockets

Education

National Technical University of Ukraine "Kyiv Polytechnic Institute"

Master's Degree in Specialized Computer Systems

National Technical University of Ukraine "Kyiv Polytechnic Institute"

Bachelor's Degree in Computer Engineering

Professional Affiliations

Odoo Community Association

Member of multiple Project Steering Committees