Andrei Kazialetski

Senior Software Engineer | Solution Architect | Python, ML/CV & LLM Applications

Poland | Remote Europe / B2B

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SUMMARY

Senior software engineer and solution architect with 20+ years in software development across Python backends, cloud systems, iOS, embedded software, and computer vision. Builds services from architecture and integrations through deployment. Current work includes LLM-assisted writing improvement, workforce estimation, and document ingestion and parsing.

SKILLS

- **Backend & APIs:** Python, FastAPI, REST, PostgreSQL, Redis, Celery, microservices
- **Cloud & architecture:** AWS, Docker, Kubernetes, Terraform, system integration, Keycloak
- **ML & computer vision:** Model fine-tuning, CNNs, ENet, Core ML, TensorFlow, OpenCV, 3D reconstruction
- **Embedded & mobile:** TensorFlow Lite Micro, ESP32, C/C++, Swift, SwiftUI, UIKit, Objective-C++
- **Additional:** Objective-C/C++, OpenGL, Metal, DirectX, shaders, OpenMP, Open3D, MySQL, MongoDB, Linux, macOS, iOS, Windows, Git, Mercurial, Perforce

EXPERIENCE

Solution Architect / Python Developer

Freelance (NDA) | Feb 2025 - Present

- Developing a cloud-based project and workforce management platform with Python/FastAPI, Kubernetes, Terraform, AWS S3/RDS, and integrations with Keycloak, Stripe, Twilio, and Google APIs.
- Work spans architecture, backend implementation, and infrastructure optimization; reported infrastructure cost reduction of approximately 20%.
- Contributing to an NDA-covered application platform with LLM-assisted writing improvement, workforce estimation, and document ingestion and parsing. Selected product and implementation details are confidential.

iOS Engineer

Freelance | Dec 2024 - Feb 2025

- Developed iOS application features with SwiftUI, Combine, and networking APIs.

Senior Software Engineer

InData Labs | Mar 2020 - Oct 2024

- **Computer Vision & ML (Mar 2020 - Feb 2022; May - Dec 2023):** commercial pose estimation, background removal, and 3D reconstruction with TrueDepth/LiDAR; fine-tuned CV models, adapted ENet for Core ML, improved classification accuracy by 15%, and reduced model size by 40%.
- **Embedded ML (Jan - Mar 2024):** created, trained, and quantized CNNs for image classification and bounding-box regression; implemented inference on ESP32 with TensorFlow Lite Micro.
- **Python & cloud services (Mar - Jul 2024):** developed FastAPI/RabbitMQ data-acquisition and processing services, containerized deployment, and AWS infrastructure; acted as DevOps.
- **iOS & cloud integrations (Apr - Jun 2022; Nov 2022 - May 2023):** built an iOS cooking assistant and integrated AWS speech-to-text, AppsFlyer, and OneSignal.
- **Scalable advertising platform (Jul - Oct 2022):** performance tests, base architecture, and scalable scraping on AWS.

Senior C++ Developer

Softeq Development FLLC | Feb 2019 - Feb 2020

- ARM / Qualcomm Snapdragon 820 audio processing; auto-exposure and image-correction algorithms.

Senior iOS Developer

Digiteum LLC | Jun 2012 - Jan 2019

- Developed iOS applications and worked on image analysis with Python, Hadoop, PostgreSQL, Django, TensorFlow, and Keras.

Senior iOS Developer

FinalView | Apr 2009 - May 2012

- Designed customer applications and created a framework for faster UI implementation in mobile products.

Software Engineer

EffectiveSoft | Jan 2006 - Apr 2009

- Analyzed requirements, developed application architecture, and implemented software in C++.

Software Engineer

MoveYourWeb / Coolway | Jan 2003 - Dec 2005

- Developed software for Qualcomm MSM5000/MSM5105 mobile platforms, including memory-test data handling and retrying SQL requests after network failures.

PROJECTS

- **FDTester:** ATmega2560-based floppy disk controller and diagnostics - github.com/avkghost/FDTester
- **Iomega Tools:** utilities for legacy SCSI storage devices - github.com/avkghost/iomega_tools
- **BlueSCSI / DaynaPORT:** SCSI networking bridge experiments and Linux/Windows driver work - github.com/avkghost
- **Agent Loop:** Open-source Python AI agent framework with local LLM support, MCP tool integration, configurable agents and skills, session history, token management, and context handling. - github.com/avkghost/agent-loop
- Technical articles and engineering portfolio: iamavk.info/blog

EDUCATION

- Belarusian State University of Informatics and Radioelectronics (BSUIR) - System Engineering

CERTIFICATIONS

- Deep Learning Specialization and related DeepLearning.AI courses on Coursera (2018-2019): Neural Networks and Deep Learning, Improving Deep Neural Networks, Structuring ML Projects, CNNs, Sequence Models

LANGUAGES

English: B2 | Polish: Upper-intermediate | Belarusian: Native | Russian: Native