



BAURZHAN ATINOV

Open to speaking

Senior Software Engineer · AI & Computer Vision · High-Performance Systems

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PROFESSIONAL SUMMARY

Senior software engineer with **18+ years** of experience building systems where every millisecond and every byte counts: **video cores, face recognition engines, computer-vision pipelines and production AI agents**. Author of **FaceX**, an open-source face stack that runs entirely in the browser (WebAssembly) with **99.07% accuracy on LFW at ~3 ms per face**, and co-author of **ParkVision**, a license-plate recognition pipeline for Kazakhstan and 6 more countries at 40–60 ms per frame. Built AI tool suites for legal tech (**TergeuPro / ZanAlem**, 12 AI tools) and preschool EdTech (**KindWatch**, 7 AI tools), and currently lead high-load educational platforms (bilimal.kz, sabidamu.kz) as Chief Software Engineer. Strong in Go, C, Python and low-level optimization; comfortable owning products end to end, from model training to backend, infrastructure and UI.

18+
years shipping software

99.07%
FaceX accuracy on LFW

~3 ms
per face, FaceX pipeline

26
AI solutions across 5
projects

1085
passing tests in Aegis

PROFESSIONAL EXPERIENCE

Chief Software Engineer

Dec 2022 – Present

TOO "CIT" Orleu, Karaganda, Kazakhstan

- ◆ Architect and lead development of high-load educational platforms, including **bilimal.kz** and **sabidamu.kz**.
- ◆ Designed and implemented an automated **AI-assisted proctoring system** that monitors and secures online examinations.
- ◆ Optimized backend infrastructure with **Go and PostgreSQL** to keep the platforms stable under high concurrent traffic.

Senior Software Engineer / Video Core Architect

Oct 2018 – Nov 2022

TOO Megacam / NPO Perspektiva, Karaganda

- ◆ Designed and built the **core video engine** for large-scale video surveillance systems (**egsv.kz**).
- ◆ Developed highly efficient low-level modules for video stream capture, decoding and proxying.
- ◆ Integrated enterprise software with **thousands of IP cameras** over RTSP and ONVIF.

Full-Stack Developer

Jul 2017 – Sep 2018

TOO Megacam / NPO Perspektiva, Karaganda

- ◆ Developed a specialized video streaming server architecture on Node.js.
- ◆ Built rich cross-platform desktop interfaces with Electron and Vue.js.

Software Engineer

Nov 2014 – Jul 2017

TOO "CIT" Orleu, Karaganda

- ◆ Maintained and expanded core features of the **bilimal.kz** web portal (PHP, Yii, MySQL).

Head of Systems Administration & Internal Development

Apr 2008 – Nov 2014

TOO KSKAVTO, Karaganda

- ◆ Developed an internal Electronic Document Management System (EDMS).
- ◆ Created automated inventory catalog systems with multi-site media synchronization.

EDUCATION

B.Sc. in Engineering (CAD / Computer-Aided Design)

2006

Karaganda State Technical University

TECHNICAL SKILLS

Languages	Go (Golang), C (C99), Python, JavaScript / Node.js, TypeScript, PHP, SQL
AI & Computer Vision	Face recognition & biometrics, liveness / anti-spoof, ANPR / OCR (CRNN + CTC), NN inference optimization, Edge AI, WebAssembly, RAG, LLM agents; PyTorch, OpenCV, ONNX Runtime, Ollama
Video Engineering	RTSP / ONVIF, H.264 / H.265 bitstream transformation, video streaming & video cores
Data & Infrastructure	PostgreSQL, MySQL, Firebird, SQLite, MongoDB, Docker, Linux
Frameworks	Vue.js, React, FastAPI, Express, Electron, Sequelize, Yii / Yii2, Aegis

KEY PROJECTS

FaceX Engine open source · Apache-2.0 · WebAssembly

github.com/facex-engine/facex

- ◆ Full face stack running **entirely in the browser**: detection, 98-point landmarks, **576-point 3D face mesh**, recognition and passive anti-spoof (liveness).
- ◆ Recognition accuracy **99.07% on LFW** at **~3 ms per face**; models trained from scratch.
- ◆ Zero server: camera frames never leave the device; model weights protected with AES-256-GCM.

Tech: C · WebAssembly · neural network inference optimization · Edge AI

ParkVision computer vision · ANPR / LPR · 2025

- ◆ Own neural pipeline for **automatic license-plate recognition** of Kazakhstan plates and **6 more countries** (7 total), plus vehicle-type classification (UNECE) for parking, barriers and access control.
- ◆ Detect → perspective rectification → OCR (**CRNN + CTC**) → classify, served over a REST API at **40–60 ms per frame** on GPU (CUDA).
- ◆ Co-authored with Aidos Zhumadilov.

Tech: PyTorch · OpenCV · ONNX Runtime · Go · C helpers

TergeuPro / ZanaAlem AI platform · legal tech · Kazakhstan

zanalem.kz · tergeupro.kz

- ◆ Platform for investigators in Kazakhstan: bilingual (RU / KZ) legal base, case work and procedural documents, with a suite of **12 AI tools** for investigation and forensics.
- ◆ Self-hosted **RAG legal assistant** over the Criminal Code with article citations (Qwen 2.5 72B); cross-analysis of case documents for contradictions and links; speech-to-text and audio forensics.
- ◆ Forensic AI: signature examination (Siamese network), image forensics (ELA, copy-move, double JPEG, steganography; Go), shoeprint 3D reconstruction from a photo, deepfake detection.
- ◆ Public platform ZanaAlem (Smart Tergeushy, Smart Kriminalist, legal library, training, forum). Partners include the Kyzylorda Region Prosecutor's Office, Korkyt Ata Kyzylorda University and the Kostanay Academy of the MIA.

Tech: React 18 + TypeScript · Yii2 / PHP 8.1 · PostgreSQL 15 · Go · Python / FastAPI · Ollama

KindWatch AI-assisted EdTech · preschool

monit.sabidamu.kz

- ◆ Child-development monitoring for kindergartens (children, groups, staff, development reports, curricula) in Russian and Kazakh.
- ◆ **7 AI tools**: AI development characteristics, group recommendations, assessment analytics, AI announcements ("Aidana"), ticket triage & watchdog, a **consultant agent with tool actions and confirmation cards**, and an AI regression suite on live data.

Tech: Yii2 / PHP 8 · PostgreSQL · Vue · LLM APIs

Aegis open source · MIT

github.com/bauratynov/aegis

- ◆ Zero-build reactive UI engine for server-rendered pages: signals, islands, tagged-template HTML, forms, router — one ES module, **0 dependencies, 1085 tests**; works with Django, Laravel, Rails, Go and PHP backends. atinov.pro runs on its signals core.

NexusEye Stack video

- ◆ Video management software stack for high-efficiency H.264 / H.265 bitstream processing without heavy pixel-decoding overhead.

AI Agents & Automation current focus

- ◆ Backend logic for autonomous systems, automated analytical loops (plan → act → verify) and smart video-processing agents.

LANGUAGES

Kazakh — native

Russian — native / bilingual (C2)

English — intermediate (B1), professional technical communication and documentation

SPEAKING

Open to conference talks, workshops, meetups and podcasts (KZ / RU / EN) on: computer vision on the edge and in the browser; face recognition from scratch; Kazakhstan license-plate recognition; AI agents in production; AI for legal tech; zero-build frontends.