

Mobile Developer (Android, Kotlin, KMP, iOS)

Anton Nikolaevich Veretenenko

SUMMARY

Versatile mobile developer with 5+ years of commercial Android development and 18+ years of total engineering experience. Full-stack perspective spanning mobile UI/UX, low-level hardware integration, and backend services. Skilled in modern Android architecture (Jetpack Compose, Coroutines, MVVM/MVI) and cross-platform development (Kotlin Multiplatform, Swift, React Native). Published articles in "Hacker" magazine on reverse engineering topics. Backend proficiency in Python (FastAPI, Django), Docker, PostgreSQL, and REST/WebSocket APIs. Experience building BLE-connected Android apps, kiosk systems, and embedded device management interfaces.

EXPERIENCE

Total engineering experience — 18+ years.

Lead Engineer-Developer

Jan 2026 – Present

Freelance (under NDA)

- Designed and built a mixed-chemistry battery charging device powered by a single solar panel: MOSFET switch routing the panel input between two MPPT controllers, voltage monitoring of both batteries, hysteresis governor with anti-chatter lockout, failsafe with blocking/emergency shutdown and auto-recovery, no-reflash tuning, telemetry with OLED display, sealed CAD enclosure for potting with T-plug I/O. Tested 3 months in real-world deployment. Hardware stack: ESP32-C3, MOSFET switching, ADS1115, INA219/INA226, SSD1306 OLED, CAD enclosure for potting, T-plug. Software stack: ESP-IDF, Embedded C, FreeRTOS, PlatformIO, Bluetooth Low Energy (BLE), Nordic UART Service (NUS), I2C, NVS, USB CDC Serial CLI, JSON telemetry, energy metering (Wh). Details: github.com/anton-veretenenko/solar-bank-switch
- Developed a Bluetooth battery-voltage broadcaster for engine-bay use — streams readings to several Android terminals in range simultaneously with no pairing; companion widget app. Software: Kotlin, Jetpack Compose, compose-charts, zxing, gson, viewmodel, androidx-lifecycle, glance, play-services-code-scanner, retrofit, JSON, material3, kotlinx-coroutines. Hardware: C, ESP32-C3, DC-DC, ESP-IDF. Backend: Python, FastAPI, Docker, fcntl, JSON. Details: github.com/anton-veretenenko/btvolt-app-public
- Developed an interactive factory machine map with scheduled maintenance display, authorized-user comments with roles and access levels, multilingual UI. Software: Kotlin Multiplatform (Desktop), Compose Multiplatform, RSA, JSON, androidx-lifecycle, viewmodel, material3, kotlinx-coroutines, kotlinx-serialization. Details: github.com/anton-veretenenko/kmp-machine-layout
- Developed a Telegram assistant bot — event reminders and task tracking via custom function calling from the neural network; Perplexity, Google Gemini and GigaChat LLMs; Docker deployment. Software: Python 3, asyncio, aiosqlite, SQLite, Docker

Engineer-Programmer

Jan 2020 – Dec 2025 (6 years)

PAYCON

- Developed software for an info terminal on a shopping cart. Software: Android, Kotlin, Coroutines/Flow, Jetpack Compose, Retrofit, OkHttp, RxJava 2, MVVM/MVI, Room, SQLite3, Firebase, ARCore, AIDL, Bluetooth LE, LLM, REST API, ESP32 (ESP-IDF). Hardware: Android tablet, barcode scanner (USB-TTL), ESP32-based power system (USB-TTL). Kiosk mode (device admin, device owner, provisioning), auto-updates, two-way link with proprietary Bluetooth tags reacting to user actions, speech recognition and synthesis, LLM-based recommendations

- Developed self-checkout kiosk (KSO) software. Software: Linux, XFCE4, Python, GTK+, CSS, SQLite3. Hardware: PC, touch screen, barcode scanner, scales, receipt printer, fiscal register, online cash register, payment terminals. Kiosk mode, auto-updates, scanner/scales/printer/fiscal-register/payment-terminal integration via USB-TTL
- Developed restaurant ordering software. Software: Kotlin Multiplatform, KMP, Coroutines, Jetpack Compose, Retrofit, OkHttp, REST API, Swift. Hardware: Android phones and iPhones. Product catalog, supplier chat, orders, photo/video/documents in chat
- Developed fast-food/cafe display software. Software: Linux, XFCE4, Python, GTK+, CSS, REST API, Figma. Hardware: Raspberry Pi, TV. Above-counter menu screens, scheduled menu auto-updates from Figma, power saving
- Developed order-picker software for TSD terminals. Software: Android, React Native, JavaScript, HTML, REST API, SQLite3, Intents. Hardware: Android TSD, barcode scanner. Auto-updates, scanner integration via intents
- Developed indoor navigation system architecture and software. Software: Linux, Python, GTK+, CSS, REST API. Hardware: Android, Raspberry Pi, PC. Mapping engine with pathfinding, indoor map editor, auto-updates
- Developed software for the "Smart Cart" project. Software: Linux, XFCE4, Python, GTK+, CSS, REST API, WebSockets, GStreamer, Canvas, SQLite3, Bluetooth. Hardware: Raspberry Pi, touch screen, barcode scanner, battery charging and telemetry unit, wireless and Bluetooth scanners. Hardware-software interfacing via single-board UART/USB for live data display and processing, auto-updates, ESP32 C(++) firmware for the auxiliary telemetry unit and battery charging system

Engineer-Programmer

Nov 2023 – Apr 2024 (6 months)

Davtech / Graviks

- "Graviks" prototype bring-up and kiosk-GUI software. Software: Linux, XFCE4, Python, GTK+, CSS. Hardware: Radxa single-board computer, touch screen, 2 cameras, GPS module, 4G modem, battery charging system. Dual-camera handling, math model, battery-charge display driver, neural network integration

Embedded Developer (Freelance)

Jan 2014 – Dec 2019 (6 years)

Freelance (under NDA)

- Custom electronics development and PCB design
- Microcontroller programming, mostly MSP430, AVR, Cortex-M
- Various bus converters; node emulators/simulators based on originals
- Reverse engineering of devices and firmware, communication protocol recovery
- Wireless sensors with Bluetooth 4 / LE / BLE / Smart / 5 interfaces; MBED framework

Lead Engineer

Jan 2008 – Jan 2014 (6 years 1 month)

Freelance (under NDA)

- PHP/Symfony backend development for web applications
- HTML5/Canvas/JavaScript interactive frontend implementations
- Trading robot automated testing system, Windows and Linux scripting; test-result visualization and reporting
- MetaTrader 4 plugin development for financial trading platforms

SKILLS

Android Core

Kotlin, Java, Jetpack Compose, Coroutines, Flow, RxJava, MVVM, MVI, Clean Architecture

Android Libraries & SDK

Room, SQLite3, Retrofit, OkHttp, Hilt/Dagger, Navigation, WorkManager, DataStore, Firebase, ARCore, Android TV, Glance, Material3, Kiosk Mode, Device Admin, MDM, Offline-First, JUnit, AIDL

Cross-platform

Kotlin Multiplatform, Compose Multiplatform, Swift, UIKit, React Native, Expo

Backend & Infrastructure

Python, FastAPI, Django, Tornado, Flask, asyncio, Pytest, OpenAI, Docker, PostgreSQL, MongoDB, REST, WebSocket, AWS, GTK+, Canvas, Bash, Linux, Raspberry Pi

CERTIFICATES

2012

MITx 6.002x: Circuits and Electronics

MIT (edX)

Verify ↗ (<https://verify.edx.org/cert/317037ee95ed49ebb6142ef20f527706>) PDF ↗ (<https://veretenenko.ru/anton/mitx-6002x-certificate.pdf>)

2014

MITx 6.00.1x: Introduction to Computer Science and Programming Using Python

MIT (edX)

Verify ↗ (<https://verify.edx.org/cert/07e1b2377c044bb8aec8b55c19418eb2>)

2014

MITx 6.01x: Introduction to EECS I — "Shape the World"

MIT (edX)

Verify

LANGUAGES

Russian — Native, English — B2 (Upper-Intermediate)

Contact

EMAIL

anton@veretenenko.ru

TELEGRAM

[@egaistek](https://t.me/egaistek)

GITHUB

github.com/anton-veretenenko