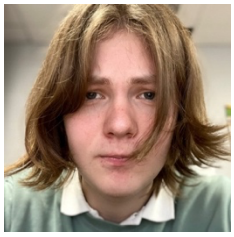

Tikhon Petrishchev

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Key Skills:

Software design and development using Go, Python, Swift:

- Integration with external devices (Bluetooth, BLE);
- Development of microservices and backends using Python and Go;
- Development of mobile applications for iOS (Swift, SwiftUI);
- Working with low-level protocols and binary data, reverse engineering for device integration.

Work Experience:

"Telepat" LLC — Telemedicine, Moscow (4 years of experience)

2019 — 2021	Developed software for a smart speaker integrated with a medical service. Core: Python/Yandex SpeechKit + custom library (GitHub link); Backend: Django/Django Rest Framework/Postgres; Mini iOS app: Swift/SwiftUI.
2021	Integrated the “Serdechko” heart rate monitor into the Medical Messenger (product: Medsenger); Patched mobile applications for iOS and Android; Developed backend for a microservice using Flask (python).
2022	Integrated the "Contec" Bluetooth spirometer into the Medical Messenger (product: Medsenger). Since the Chinese device lacked documentation, independently performed reverse engineering: decompiled the JAR module containing the Bluetooth/BLE protocol code. Developed a mobile app from scratch for integrating the "Contec" spirometer for iOS (Swift/SwiftUI/CoreBluetooth) – GitHub link. Backend for microservice integration: Flask.
2022-2024	Developed a mobile app for iOS for Medsenger (~60,000 lines of code) using Swift/SwiftUI/CoreData/HealthKit, including video calls via WebRTC. This was the largest project independently completed from scratch. Gained expertise in developing multi-threaded applications and advanced Swift concepts (asynchronous programming, threading, and a rich type system akin to Rust).
2023	Developed an agent for configurable automatic medical surveys via phone using the Voximplant service: Django/Django Rest Framework/Postgres. Created a mobile app for integrating with the Bluetooth/BLE blood pressure monitor "Aksma". Complete documentation was available for the protocol, eliminating the need for reverse engineering. With a larger user base, the application was rigorously debugged and abstracted, enabling replacement of the Bluetooth driver with a USB connection. As a result, the blood pressure monitors could operate via a wired connection with the same app compiled for macOS.
2024	Developed a library for internal microservice APIs in Go: GitHub link. Integrated FreeStyle Libre glucose monitors using Go/Echo/Templ/SQLx + Postgres. Integrated Xiaomi smart scales into Medsenger: - Mobile app on Flutter for iOS and Android. - Microservice integration in Go/Echo/Templ/SQLx + Postgres.

	Currently developing a smart pill organizer for Medsenger, which tracks medication times and provides reminders integrated with Medsenger (in progress). Language: C (esp32c3 / ESP-IDF framework).

Education:

2026 (Expected)	MIREA - Russian Technological University, Moscow 3rd year student, Specialty: Industrial Informatics.

GitHub: https://github.com/tikhonp