Lakhan Lothiyi

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PROFILE

Swift and SwiftUI developer specialising in Apple platform applications. Most notably created WatchTube — a YouTube client for Apple Watch that surpassed 3.1 million downloads and generated hundreds of international press articles. Core team member of palera1n, a prominent open-source iOS jailbreak project (6.3k+ GitHub stars). Currently studying BSc Computer Science with AI at Birmingham City University, achieving 79% in Year 1. ISC2 Certified in Cybersecurity; IBM Enterprise Design Thinking Practitioner.

EDUCATION

Birmingham City University – *BSc Computer Science with Artificial Intelligence* 2025 – Present
Year 1 complete — 79% average across all modules.

George Salter Academy – *A-Levels* 2023 – 2025
Mathematics · Physics · Psychology

George Salter Academy – *GCSEs* 2021 – 2023
Computer Science · Mathematics · Combined Science · English Language · English Literature · Art and Design: Photography · History · French · Religious Studies (Short Course)

TECHNICAL SKILLS

Languages: Swift (Advanced), TypeScript / JavaScript (Intermediate), Python (Intermediate), Objective-C
Frameworks: SwiftUI, Next.js, Vapor (server-side Swift), AppKit, UIKit

Platforms: iOS, macOS, watchOS, Linux, Web
Tools: Git, Xcode, Supabase, Docker, Anthropic API, cloud server deployment, low-level Core Audio / private APIs

PROJECTS & OPEN SOURCE

WatchTube / DeltaTube 3.1 million+ downloads
Pioneering YouTube client for Apple Watch — the first of its kind. Achieved over 3.1 million downloads; widely covered in international technology press.
- Led a multinational development team, managing task allocation and project milestones
- Deployed and maintained cloud server infrastructure that the app relied upon
- Organised a 6,000-member beta programme, using feedback to drive UX improvements
- First shipped Swift project; reached near-feature-complete state within weeks

Paicord 310 ★ · github.com/llsc12/Paicord
Native iOS/macOS Discord client in Swift/SwiftUI. Aims for feature parity with the official client, with quality-of-life additions and a custom theming system.
- Sole lead; architected, built, and shipped 49 tagged releases
- Manages open-source community, issue triage, and contributor coordination

palera1n (core contributor) 6,300+ ★ · github.com/palera1n
Core team member of palera1n — a widely-deployed iOS/iPadOS/tvOS jailbreak supporting A8–A11 devices on iOS 15+.
- Contributed to the Swift-based loader application (170 ★) and supporting tooling
- Works within a small, security-focused team on a technically demanding codebase

Meret
iPod-inspired local music player for iOS featuring CoverFlow, synced lyrics, a custom graphical EQ, and low-level audio processing via Core Audio.

- Used Objective-C runtime to interface with private Apple frameworks

DDBKit 12 ★ · github.com/DDBKit/DDBKit
Declarative Swift framework for building Discord bots, with documentation site at ddbkit.llsc12.me.

XRPC 23 ★ · github.com/llsc12/XRPC
Xcode Discord Rich Presence integration — avoids AppleScript for reliability.

Lodestone In development · macOS
Native macOS Minecraft launcher built in Swift/SwiftUI with a modular architecture. Designed as a polished, first-class Mac application for managing Minecraft instances.

- Multi-instance management with support for Vanilla, Forge, Fabric, and other mod loaders
- Modrinth and CurseForge API integrations for mod browsing, installation, and modpack support
- Imports .mrpack and CurseForge/Prism modpacks; exports Prism-compatible packs
- Automatic Java version management — detects, downloads, and selects the correct JDK per instance
- Microsoft/Mojang OAuth authentication, skin and cape management
- Built-in RCON client and a sandboxed LodestoneServerAgent process for server management
- Comprehensive unit-test suite covering networking models, launch config, mod loaders, and RCON

SunSync Smart Lamp BCU Innovation Fest · Team project
AI-powered smart lighting system that aligns indoor lighting with natural human circadian rhythms to improve sleep quality, productivity, and wellbeing. Combines adaptive LED hardware with intelligent behavioural analysis to deliver a personalised lighting schedule, controlled via an iOS/Android companion app.

- Lamp dims to a warm orange glow 45 minutes before sleep; transitions from darkness to bright white to simulate sunrise 45 minutes before wake-up
- Implemented a music-sync feature for Innovation Fest — LED lighting synchronises to ambient audio in real-time, used to draw attendees to the booth
- Contributed Swift iOS app development and project management across a five-person team over a three-month build
- Pitched at Birmingham City University Innovation Fest (Feb 2026)

AutoReviver Unihack Innovation Fest · 24-hour hackathon · github.com/llsc12/UnihackInnovationFest
AI-powered used car parts platform built in 24 hours at the Unihack Innovation Fest hackathon. Addresses the fragmented second-hand parts market by adding an intelligence layer for both buyers and sellers.

- Smart listing generator — seller inputs basic part details and the Anthropic Claude API produces a structured, professional listing with title, description, condition notes, compatibility summary, and suggested keywords
- Compatibility checker — buyer enters vehicle make, model, and year; platform returns a compatible / maybe / not compatible verdict with confidence score and explanation
- Trust scoring system — each listing receives a quality score out of 100 based on completeness signals (part number, images, condition notes, return policy)
- Built with Next.js 15, React 19, TypeScript, Tailwind CSS, Supabase, and Docker; deployed to Vercel
- Developed as part of a four-person team including Lee Wheeler and Victor Murgeneanu

PlayStation App — Native macOS Clone In development
AI-assisted reverse engineering of the PlayStation iOS app (running via PlayCover on Apple Silicon) to produce a native macOS client. Focused on understanding and bypassing the app's crash-guards and SSL pinning to enable traffic inspection and UI re-implementation.

- Wrote a custom DYLD_INSERT_LIBRARIES dylib in Objective-C/C injected at launch to patch the app at runtime
- Implemented an ARM64 SIGTRAP/BRK signal handler that tracks consecutive breakpoint instructions per-thread and performs a clean frame-pointer return to escape assertion-failure crash sequences
- Hooked NSProcessInfo.isiOSAppOnMac via ObjC method swizzling to suppress iOS-on-Mac detection, making the app believe it is running on a native iPhone
- Bypassed TrustKit SSL pinning at three layers: DYLD_INTERPOSE on SecTrustEvaluateWithError, method swizzling of TSKNSURLSessionDelegateProxy, and patching TSKPinningValidator to always permit connections
- Patched PlayTools' PlayKeychain Swift class to stub keychain operations and prevent authentication crashes
- Calibrated the PlayCover viewport by patching PlayScreen.screenRect to return the correct 1480×830 content bounds, achieving 1:1 touch-coordinate mapping without disturbing the React Native layout engine

CERTIFICATIONS

ISC2 – *Certified in Cybersecurity (CC)* Oct 2024
Industry-recognised entry-level certification covering security principles, access controls, network security, and incident response.

IBM – *Enterprise Design Thinking Practitioner* Feb 2026
IBM certification in human-centred design methodology, covering user research, ideation, and iterative solution design.

WORK EXPERIENCE

George Salter Academy — ICT Department – *Teaching Assistant* Jun 2023
Supported classroom ICT lessons, assisted students with programming tasks, and helped inspire interest in the technology industry. Adapted communication to younger learners and developed classroom management skills.

LA Tutoring Ltd – *Freelance Web Developer* 2019
Designed and built the company website — multi-page, with contact/enquiry forms, ergonomic navigation, and SEO management.

REFERENCES

Available upon request.