

LORENZO MATRULLO

Software Engineer

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PROFESSIONAL EXPERIENCE

Onyx, Remote

Jan 2025 - Present

Founder, CEO & Lead Developer | Full-stack Development, Distributed Systems, Security, Product & DevOps

- Founded and built **Onyx**, a premium cross-platform software ecosystem including a web store, desktop launcher, Discord store, automated licensing services, and a gated Discord community.
- Architected a **unified authentication and entitlement system** synced across all platforms (web, desktop, Discord bot, automation services), eliminating repeated logins and ensuring consistent access control.
- Developed a full-stack dashboard (React, Node.js, MongoDB) with automated onboarding and real-time product delivery, reducing support workload by ~75%.
- Implemented Discord OAuth and code-based linking with instant role syncing and zero manual verification, cutting onboarding time to under 30 seconds.
- Built fraud-resistant licensing and telemetry services with audit logging, tamper detection, and automated key lifecycle handling, reducing chargeback and leak risk.
- Created CI/CD pipelines using GitHub Actions and Docker, reducing deployment time from several minutes to under 30 seconds and enabling fast, zero-downtime releases.
- **Tech Stack:** C++, Windows API, ImGui, TypeScript, React, Next.js, TailwindCSS, JavaScript, Node.js, Discord.js, MongoDB, APIs, Vite, GitHub, Cloudflare, Figma

Mezzogiorno Discord Tools, Remote

Jul 2025 - Sept 2025

Discord Systems Engineer | Bot Development, Automation, Community Tools

- Designed and deployed a custom Discord bot and server infrastructure for streamer Mezzogiorno, supporting automated moderation, user interaction systems, and community management workflows.
- Implemented real-time event and notification features using Discord.js and MongoDB, enabling instant updates for streams, announcements, and role-based alerts.
- Built interactive slash commands, buttons, and menus to streamline user onboarding, support requests, and engagement-driven features.
- Developed a rule-based moderation system with message logging, anti-spam filtering, and automated escalation logic to reduce manual moderation overhead.
- Integrated REST API endpoints for external automation, enabling future scalability and cross-platform feature expansion.
- **Tech Stack:** JavaScript, Node.js, Discord.js, MongoDB, REST API

EDUCATION

Università degli Studi di Napoli Federico, Naples, Italy

Expected June 2026

Apple Developer Academy

- Relevant Coursework: Swift & SwiftUI Development for iOS, macOS, watchOS, tvOS; Accessibility-Driven UI/UX, Product Strategy & Entrepreneurship

Università degli Studi di Napoli Parthenope, Naples, Italy

Apr 2025 - Jun 2025

AWS Academy Cloud Developing

- Relevant Coursework: Serverless Application Development with AWS Lambda & API Gateway, Python-based backend development and DynamoDB data modeling, S3 Object Storage & CloudFront CDN security, Containerization with Docker & ECS, Authentication with Amazon Cognito, Asynchronous Messaging with SNS/SQS, CI/CD Automation Pipelines, Step Functions Orchestration — with strong emphasis on security, privacy, cost optimization, cloud responsibility models, and cybersecurity best practices

Università degli Studi di Napoli Parthenope, Naples, Italy

Jan 2025 - Feb 2025

AWS Academy Cloud Foundations

- Relevant Coursework: Cloud Architecture Fundamentals, Identity & Access Management (IAM), VPC Networking & Subnet Design, EC2 Compute Provisioning, EBS Storage, RDS Database Deployment, Elastic Load Balancing & Auto Scaling, Serverless Computing with AWS Lambda

Università degli Studi di Napoli Parthenope, Naples, Italy

Oct 2024 - Nov 2024

Apple iOS Foundation Program

- Relevant Coursework: SwiftUI App Development, UI/UX Layout & Navigation, Data Structures in Swift, CoreML for On-Device ML, MapKit & Location-Based Apps, AV Foundation, SpriteKit 2D Graphics, Team-Based Challenge Projects & Final App Presentation

Università degli Studi di Napoli Parthenope, Naples, Italy

Oct 2023

Bachelor's Degree in Computer Science

- Relevant Coursework: Computer Architecture, Algorithms and Data Structures, Object-Oriented Programming (Java/C++), Operating Systems, Database Design, Computer Networks, Numerical Computing, Software Engineering & UX Interaction, Distributed and Parallel Computing, Image Processing, Economics & Business Organization

SKILLS

Programming Languages: Swift, JavaScript, TypeScript, Python, C, C++, Assembly, SQL, Batch

Frontend & UI: SwiftUI, React, Next.js, Tailwind, HTML, CSS, Vite, ImGui

Backend & APIs: Node.js, Express, REST APIs, Serverless APIs (AWS Lambda + API Gateway), Supabase, MongoDB, Windows API

Apple Ecosystem Development: iOS & macOS development, SwiftUI, Combine, Core Data/SwiftData, AVFoundation, Core ML, CloudKit, Sign in with Apple, Accessibility-First Design

Cloud & DevOps: AWS (IAM, VPC, EC2, Lambda, DynamoDB, S3, CloudFront, RDS, SNS/SQS, CI/CD, Step Functions), Docker, Git, Cloudflare, VPS setup & configuration, SSH administration, Hosting & Deployment workflows

Automation & Integrations: Discord.js bots, Telegram API, Spotify API, OpenAI API, n8n workflows

Design & Tools: Sketch, Adobe Creative Cloud, Xcode, Visual Studio Code, Visual Studio, FileZilla, PuTTY, GitHub

Languages: Italian – Native, English – Fluent

AWARDS & RECOGNITIONS

- Selected for the **Apple Developer Academy** at Università degli Studi di Napoli Federico II (Naples, Italy 2025) — chosen from a competitive global applicant pool to join a full-time programme combining app development, UX design, and startup creation.
- Built "**TastEcho**" — a voice-command accessibility app for the visually impaired, developed as the final project awarded by the **Apple iOS Foundation Program**; showcases advanced UX with social impact and a strong commitment to inclusive design.

SELECTED CERTIFICATES

- Apple Search Ads Certification – Apple (2025): Campaign creation & optimization; keyword strategy; audience targeting; bid & budget management; Creative Sets & ad variations; performance measurement & attribution; best practices for App Store advertising
- Kubernetes and Docker Containers on Google Cloud – Google Cloud (2025): Docker containerization, GKE deployment, image optimization, Artifact Registry, YAML workloads, autoscaling, and Cloud Operations monitoring
- AWS Academy Cloud Foundations – AWS (2025): IAM & Cloud Security; VPC Networking; EC2 Compute; EBS & S3 Storage; RDS Databases; Elastic Load Balancing & Auto Scaling; Cloud Cost & Risk Management
- AWS Academy Cloud Developing – AWS (2025): Serverless Apps with Lambda & API Gateway; DynamoDB Data Modeling; Docker & ECS Containers; SNS/SQS Messaging; Cognito Authentication; CI/CD Pipelines; CloudFront Caching & Security
- Apple iOS Foundation Program – Apple / Università Parthenope (2024): Swift & SwiftUI Development; MVC & Combine Architecture; SpriteKit & CoreML Basics; MapKit & Navigation UI; Accessibility-First Design; Challenge-Based Learning Final App Project