

Mario Rafael Becerra Dueñas

Learning Experience Designer & EdTech AI Engineer

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Learning Experience Designer with 10+ years in instructional design, now building the AI infrastructure that powers modern education. Designed 50+ courses across B2B, B2C, and K-12. Built GrassLMS end-to-end (FastAPI + Next.js, 80+ features, live in production) with an integrated Knowledge RAG module. Created a 3-phase LLM knowledge distillation pipeline processing 6,300+ educational sources with LLM-as-Judge verification. Custom Python pipelines cut content production time by 60% at Algonova. English C1, native Russian and Ukrainian, Spanish A2–B1.

TECHNICAL SKILLS

AI & LLM Engineering: LLM eval pipelines, LLM-as-Judge verification, RAG (pgvector + Voyage AI + hybrid retrieval), prompt engineering, knowledge graph architecture, AI agent tooling (MCP servers)

AI-assisted course design: LLM-driven iteration on SCORM course flow, pacing, UX/LX patterns, interaction design, microcopy, visual direction

Development: Python, FastAPI, Next.js, TypeScript, PostgreSQL, Docker, Redis, Flask, HTML/CSS/JS, Playwright, REST APIs

Design & Media: Figma, Photoshop, Illustrator, Premiere Pro, Camtasia, OBS

Authoring & LMS: Articulate Storyline, Articulate Rise, Moodle, SCORM/xAPI, custom LMS platforms

Project Management: Notion, Jira, Trello, Miro, Google Suite, Slack

PROFESSIONAL EXPERIENCE

Founder & Solo Developer — GrassLMS

2025 – Present

Personal project | [grasslms.online](#)

FastAPI + Next.js + PostgreSQL + Docker + Redis. 117 Python files / 12K+ lines, 29 modules. 152 TS files / 37K+ lines, 59 routes.

- Implemented 9 lesson types and 11 exercise formats: multi-language code editor (37 langs), Desmos math, 2D robot puzzles, 3D worlds
- Built teacher tooling (course builder, gradebook, assignment queue, analytics) and student experience (auto-grading sandbox, gamification, certificates)
- B2B SaaS billing with Stripe; 4C/ID course generator transforming raw content into structured curriculum

Knowledge RAG Module

- pgvector vector search + Voyage AI embeddings + hybrid retrieval (vector + full-text + trigram)
- 3-phase LLM pipeline: Extraction → LLM-as-Judge verification → vector ingestion. 6,300+ sources processed

Learning Experience Designer & AI Pipeline Engineer

Mar 2025 – Present

Algonova | Freelance

Instructional Design

- Designed 36-lesson interactive course for ages 9–11: original storyline, characters, program simulators, quest progression
- Contributing to knowledge graph architecture for adaptive learning — skill taxonomies, prerequisite chains, diagnostic logic
- Created prompt engineering system for instructional designers: AI-generated lesson plans, rubrics, collaboration boards

AI & Automation Engineering

- Python tools cutting production time 60%: JSON → branded slides, LMS curriculum seeder, video analysis pipeline (Whisper + scoring, 25+ scripts)
- Miro Board Creator & FigJam generator (Python + brand config + layout engine)
- Playwright automation for bulk LMS audits; Tampermonkey scripts saving ~5h/week

AI Tools & Infrastructure Engineer

2025 – Present

Independent

- 3 custom MCP servers: Google Workspace (10 APIs, OAuth, Docker), Telegram (MTPROTO), Notion (API)
- Telegram data pipeline: MTPROTO scraping, Vision-OCR for 388 photos, 700+ notes organized

Learning Experience Designer

Jan 2025 – Nov 2025

Beezo | Freelance

- Solo-designed 4 multi-tier course lines (video, articles, assignments) on cryptocurrency & NFT fundamentals
- Progressive learning paths beginner→advanced with concept scaffolding across modules

Learning Experience Designer

Feb 2025 – Dec 2025

BEAM Institute of Technology | Freelance

- Created Data Governance course from scratch with Billigence SMEs
- Full ID cycle: needs analysis, curriculum architecture, content development, quality review

Learning Experience Designer

Jan 2024 – Oct 2024

Nebius Group (TripleTen)

- Localized 15+ B2B courses for Latin American market; cross-functional status tracking system
- HeyGen AI avatar scripts and presentations; SME collaboration on AI/programming course updates

Learning Experience Designer

Jan 2023 – Jan 2024

Yandex Practicum

- End-to-end curricula for Web Design, UX/UI, Graphic Design aligned with industry hiring requirements
- Multi-format materials (tutorials, assignments, assessments); cross-functional development pipeline

Senior Instructional Designer

Nov 2021 – Jul 2023

Foxford

- Led ID team, content audits, web design course updates
- Automated code evaluation for Python courses — 40% reduction in manual grading

Learning Experience Designer & Team Lead

May 2019 – Oct 2021

SIT Programming School

- Built multi-course progression paths increasing student LTV; led ID team for B2B & B2C courses
- LMS operations and content deployment for international teacher training programs

ADDITIONAL EXPERIENCE

- Teacher, SIT Programming School (2018–2021) · Senior ID, Moscow Programming School (2019–2020) · Senior Teacher, Moscow Programming School (2018–2021)
- Teacher, AEFE (2016–2019) · Teacher, Algorithmics (2018) · Lego Education Academy (2018) · Senior Teacher & ID, RobolabKids (2016–2018)

EDUCATION**UX/UI Designer Certificate** — Yandex Practicum*Competitor analysis, user scenarios, visual interface design, prototyping, user testing***Education as a Product** — Universal University*Problem identification, hypothesis generation, research-driven interactive system design***Master's in Biomedical Engineering** — RTU MIREA**Bachelor's in Manufacturing Automation** — RTU MIREA**CERTIFICATIONS**

- Game Design — Netology
- LXD: Theories & Frameworks — Coursera
- LXD: Development & Evaluation — Coursera
- JTBD Framework · 4C/ID Model

LANGUAGES

English: C1 · Spanish: A2–B1 · Ukrainian: Native · Russian: Native