PROFESSIONAL PROFILE

Lucas Federico Avendaño

Design, fabrication and integration of physical and digital experiences

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Profile

Develops solutions connecting design, fabrication, electronics and software. Since 2018 he has run YLHDs, addressing client needs and personal projects from concept through fabrication, testing and delivery. His earlier background in administration, finance and operations brings business understanding, organization and experience leading teams.

His design approach starts with understanding who a solution serves and why. He connects function, form, materials, interaction, fabrication and cost, applying this thinking to objects, interfaces and digital services. He studied Industrial Design at UCASAL; the degree is incomplete.

Lucas originates the ideas and initiatives behind his projects. He defines needs and behavior, chooses tools, directs iterations and validates results. Since March 2026 he has used AI to develop code and examine ideas, expanding what he can build with available resources. This does not imply independent programming or specialist expertise in every technology used. He brings his own computing foundation and practical programming knowledge: he understands what tools are for, explores how they work and takes part in integration decisions. The work combines that foundation with learning, research and validation of results.

Six years of practical Linux use on his own systems: Ubuntu, Linux Mint and Arch Linux through Omarchy. Installation, configuration, maintenance and integration through research, documentation and assistance as needed; not six years of professional Linux or cloud administration employment.

Current experience

2018–ACTUALIDAD

Founder • Design, fabrication and solution development • YLHDs • Salta

- Needs assessment, CAD modeling, prototyping and additive fabrication for clients; materials, production, quality, quotations and delivery.
- Physical and digital experiences using NFC/QR, electronics and AI-assisted software; integration of personal Linux systems and Windows/Linux applications.
- Printer learning and maintenance since 2018; migration of machines to Klipper and organization of a server-connected fleet.

Selected projects

PERSONAL SYSTEM IN USE AND EVOLVING

Titán_Aditivo • Hub y Pizarrón

A personal assistant for conversation and work with Lucas: Titán Hub preserves the conversation and the Pizarrón gives it audiovisual presence in the workshop. It can integrate information and tools from the surroundings.

Contribution: Lucas defines identity, interaction, tools and priorities, integrates devices and validates behavior in practice with AI-assisted development.

Result: Lucas uses it daily for conversation and workshop assistance; it continues to evolve and has compatibility and continuity limitations.

PERSONAL PROTOTYPE IN USE

Pulse Knob

A desktop control for interacting with a computer: turn it to adjust volume, press to mute, and use other modes to switch windows or desktops and display lighting responses to keyboard activity and system processes.

Contribution: Use concept, enclosure, electronics integration, profiles and interaction; direction and validation of AI-assisted firmware, bridge and interface.

Result: A personal prototype in use and tested on his computers. The application and bridge connect the computer to the microcontroller, which drives the LEDs; capabilities and integration depend on the system and version.

Other physical and digital projects: YLHDs Hub • Gestión • Totem Arena 26 • Phygital Signage Plus • Smart Gateway.

Previous experience

2017–2018

Peugeot savings-plan department manager • Eurofrancia S.A. • Peugeot • Salta

- Led 25 people: one supervisor, 20 advisers and four administrative staff. Reviewed sales, administrative and commission processes.
- Implemented management, communication and web/mobile payment tools using Wix and Mercado Pago.

2015–2016

General operations coordinator • Pieve Automotores S.A. • Renault • Tucumán

- Liaison between management, administration, sales, savings plans and aftersales; process review and improvement of administrative and delivery workflows.

2011–2014

Commercial administration lead • Centro del Norte S.A. • Renault

- Managed vehicle operations and inventory for Salta, Catamarca and La Rioja; coordinated commercial administration, vehicle registration and credit activities.

2010–2011

Sales and credit administrator • Eurofrancia S.A. • Peugeot • Salta

- Commercial administration, vehicle registration and follow-up of savings-plan and PSA Finance credit operations, from documentation through settlement.

2006–2010

Head of commercial administration • Pieve Automotores S.A. • Renault • Tucumán

- Coordinated commercial administration, vehicle registration, savings plans, cash and treasury. Banking, securities, vehicle procurement and dealership IT/network support.

2002–2006

Management assistant and commercial allocation administrator • Centro del Norte S.A. • Renault • Salta

- Regional vehicle operations and stock allocation; commercial reporting and use of Renault's PODIUM system.

1997–2002

Administration, customer service and sales • Provencred • Tarjeta Naranja • Centro del Norte • ING Insurance

- Provencred (1997–1998): customer service, data operations and credit processes. Tarjeta Naranja (1998–1999): promotion and merchant acquisition.
- Centro del Norte (2000–2001): savings-plan administration. ING Insurance (2001–2002): life insurance and savings advice.

3D printing journey

Learning and maintenance

Starting with an Anet in mid-2018, he independently learned about components, hardware, maintenance, repairs and Marlin firmware. This experience predates his current use of AI.

Klipper and his own printer fleet

He later explored Klipper, migrated machines previously running Marlin and organized a printer fleet using a server as its brain. He personally installed and configured Klipper on four workshop printers.

Integration with Titán

Later, within YLHDs and using AI-assisted development, he integrated the Hub and printer fleet: per-machine telemetry readers, remote control and assistance from Titán.

Education

2024

JavaScript logic and learning techniques • Alura • participación en Oracle Next Education (ONE)

Three courses completed and certified by Alura: Learning to learn; Programming logic: getting started with JavaScript; and Programming logic: functions and lists. Estimated workload of 8 hours per course. The full ONE pathway was not completed.

2021–2022

Industrial Design • incomplete university studies • Universidad Católica de Salta • UCASAL

17 courses passed; average 9.06/10. Grades of 10 in Product Design I and II and Materials and Processes I.

2018

Internet of Things training • MIT / Universidad Siglo 21 • según dossier profesional

Additional training listed in his professional dossier; not an MIT university degree.

2003

PC repair and maintenance • Instituto Argentino de Computación

Additional technical training.

2007–2012

Management, leadership and sales • ACARA / USAL y otras actividades de formación

Additional training in teams, market research, automotive sales and customer service.

1992–1996

Secondary education in banking and taxation • Colegio José Manuel Estrada • Salta

Completed secondary education. Initial Electrical Engineering studies at UNT (1997), no degree.

1990–1992

Early computing education • Institutos LD y Memory • Salta

Training in BASIC, MS-DOS, dBase III Plus, Lotus 1-2-3 and Pascal.

Capabilities

Design and fabrication

Needs assessment, parametric CAD in Fusion, prototyping and 3D printing since 2018; connects function, material, orientation, supports and presentation. Accumulated experience with components, maintenance, firmware and printer configuration.

Physical and digital integration

Objects using NFC/QR, microcontrollers, sensors, controls, screens and interfaces coordinating actions across devices.

Management and operations

Team coordination, treasury, commercial administration, production planning, quotations and client relationships.

Systems and assisted development

Personal Linux systems and an Ubuntu VPS, web and native Windows/Linux applications; research, definition, integration, testing and documentation with AI assistance.

Languages and opportunities

Native Spanish. English used for technical reading, with listening and conversation practice; no standardized proficiency certification.

Join a technology team working with hardware, systems and infrastructure: installing, maintaining, diagnosing and integrating solutions. Bring his practical experience and work organization skills while developing in a professional environment with varied challenges and continuous learning. He is open to an entry-level role aligned with his capabilities and to learning the team's procedures and standards.

Seeks opportunities in technology: joining a team, collaborating or developing solutions through his studio. He is available to relocate to another province or country; he currently lacks the personal funds to finance relocation, so its feasibility and support arrangements need to be agreed for each opportunity.