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CURRICULUM VITAE · RESEARCH
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Carlos Luis Barnés Infante

Graphic Designer & Computer Engineer



PROFILE

Computer Engineer and graphic designer with over 10 years of experience in design and software development. Specialised in artificial intelligence and natural language processing: he develops a text-to-speech (TTS) model for regional dialects that has earned him two national research awards, and he was a Caribbean regional finalist in the ICPC in 2023 and 2024, as well as staff in the 2025 edition. He combines engineering with university teaching and science outreach.

CONTACT

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EDUCATION

2023 — 2026

Computer Engineering · University of Holguín

Development, Software Engineering, Artificial Intelligence

Grade · 4.98

- Graduated with a Gold Diploma as the top graduate of the Computer Engineering programme.
- Top graduate in the Student Assistant and Research categories at the University of Holguín.
- Comprehensive Vanguard in the Research category at the University of Holguín.
- Scientific Merit Award from the Computer Engineering programme.

2024 — 2024

Introduction to Machine Learning Course · University of Holguín

Artificial Intelligence

Grade · 5

- Foundations of machine learning: types of learning, regression, classification and evaluation metrics.
- Groundwork for research in artificial intelligence and natural language processing.

2026 – Present

Master's Degree in Artificial Intelligence · University of Holguín

Computer Engineering

- Ongoing master's programme focused on deep learning, natural language processing and speech synthesis.
- Thesis research: reproducing the Cuban dialect through NLP models and TTS technologies (Patriae Project).

PROJECTS

2026

Aigis ERP — Intelligent circular ERP · AI development and integration

Médano

AI-powered circular ERP that automates accounting and inventory and measures the carbon footprint; gold award at the Hackathon Circular CreLab 2026.

Bases de datos · Django · Diseño gráfico · Diseño web · Planificación empresarial

2025

Dímelo — Advertising services platform · Web development

Web

Web platform for advertising services with a scalable architecture and a focus on usability, awarded at university scientific conferences.

Django · Diseño gráfico · Diseño web

2025

Pingmaster — Server monitor · Desktop application development

Software

Cross-platform Java and JavaFX application to monitor the status of remote servers with real-time notifications.

Java · JavaFX

2025

MiniJWS — Lightweight HTTP framework in Java · Framework development

Librería de Software

Lightweight, modular HTTP server framework built from scratch in Java 25: routing, middleware, static files and Android APK reading.

HTTP · Java

Jun 2024 – present

Patriae — Cuban dialect preservation · AI and NLP research

Investigación

Master's thesis and the first project in Cuba focused on reproducing the Cuban dialect with NLP and text-to-speech (TTS), built on large-scale data corpora.

.NET Framework · C# · Java · Diseño web · Construcción de software · Inteligencia artificial · Investigación · Procesamiento de lenguaje natural (PLN) · Programación

2023 – 2024

Atages — Voice trace management for SCA2 Ataxia · Research and development

Biomedical Data Processing Group (GPDB)

Voice trace management system for patients with Spinocerebellar Ataxia Type 2 (SCA2), key to early diagnosis of the disease.

Bases de datos · Java · Microsoft Access · JavaFX · Investigación · Procesamiento de audio · Procesamiento digital de señales

Jun 2023 – Jun 2024

Schedu — Academic management · Cross-platform development

Software

Cross-platform platform that unifies school timetable information and interprets the university's traditional formats in real time.

Bases de datos · Java · Python · JavaFX · Análisis de datos · Desarrollo multiplataforma · Microsoft Excel

2023

MathUtils — Advanced mathematics library in Java · Library development

Librería de Software

Java library for advanced mathematical computing: algebraic expressions as first-class objects, linear algebra, geometry and statistics.

Java · Matemáticas

May 2018 – present

Mi Cuenta Nauta · Desktop development and UI/UX

Software

Secure and lightweight desktop application to manage ETECSA internet accounts with real-time sessions and a custom UI.

.NET Framework · API de Win32 · C# · HTTP · Diseño de imagen · Diseño gráfico · Diseño web · Construcción de software · Desarrollo de software

AWARDS & HONORS

2026

First place — Hackathon Circular CreLab 2026 · Hackathon Circular CreLab

Gold award of the competition with Aigis ERP, an enterprise resource planner that applies artificial intelligence to the circular reconversion of industrial processes.

2026

Scientific Merit Award — Computer Engineering · University of Holguín (UHo)

Recognition of scientific merit in the Computer Engineering programme for the research work carried out during university studies.

2026

CITMA National Young Researcher Award · Ministry of Science, Technology and Environment of Cuba (CITMA)

National recognition granted by the Ministry of Science, Technology and Environment of Cuba for outstanding scientific contributions to the design of artificial intelligence models, natural language processing (NLP) and modular software architectures applied to computational linguistics.

2026

Relevant Award — National Student Scientific Computing Competition 2026 · University of Informatics Sciences (UCI)

Relevant Award for a methodology to build a TTS corpus with Cuban dialectal features. The work combines text selection, sociolinguistic speaker planning, recording protocols, preprocessing and automatic quality evaluation in a replicable pipeline that sets a standard for Spanish speech synthesis and helps preserve Cuba's dialectal diversity and cultural identity in digital environments.

2025

Silver Award — UHo Programming Cup 2025 · Universidad de Holguín (UHo)

Second place in the University of Holguín Programming Cup, reaffirming mastery of algorithmic problem solving in competition.

2024

Caribbean Regional Finalist — ICPC 2024 · International Collegiate Programming Contest (ICPC)

Caribbean regional finalist in the ICPC for the second consecutive cycle, consolidating experience in high-level algorithmic optimisation, mathematical problem solving applied to computing and the design of efficient software solutions.

2023

Caribbean Regional Finalist — ICPC 2023 · International Collegiate Programming Contest (ICPC)

Caribbean regional finalist in the International Collegiate Programming Contest (ICPC) after clearing the local qualifying rounds. The competition demands solving high-level problems through advanced algorithm design, microsecond-level code optimisation and efficient management of data structures under strict time constraints.

2023

Gold Award — UHo Programming Cup 2023 · Universidad de Holguín (UHo)

First place in the University of Holguín Programming Cup, passing tests on advanced algorithms and data structures under strict time constraints.

EXPERIENCE

2026 — Present

Discrete Mathematics Lecturer · University of Holguín

- Teaches the Discrete Mathematics course, bringing renewed teaching dynamics such as gamification into the syllabus.
- Prepares students in the mathematical foundations that underpin advanced subjects such as Artificial Intelligence.

2022 — Present

Graphic Designer · Dhahabi LLC

- Develops the company's brand essence: corporate identity, application manual, digital art and image-generation systems.
- Designs the corporate website and digital products, from planning and architecture to visual implementation.
- Defines the communication, marketing and social media plan, including audiovisuals and templates.

2022 — 2023

Market Researcher · Swachile

- Carried out market analysis and price surveys of local businesses to support commercial decisions.
- Designed and structured databases to organise, query and systematise the information gathered.

2021 — 2021

Web Developer · WMC LLC

- Designed and implemented a corporate website integrating remittance services, a travel agency, combos and insurance advisory.
- Developed the interfaces and architecture of each service within a unified experience.

2016 — Present

Freelance Graphic Designer & Developer · barnesinside

- Designs and develops visual identities, websites and 3D experiences for clients across different sectors.
- Works at the intersection of design and code: design systems, motion and end-to-end builds with Django, Tailwind and Three.js.
- Produces editorial and brand pieces for national clients, with support in art direction, photo retouching and layout.
- Collaborates on corporate identity and packaging design projects.
- Brings print production processes into the editorial and brand workflow.

SKILLS

TECHNICAL SKILLS

Python · Django · REST APIs · PostgreSQL · SQLite · Brand identity · Editorial design · Typography · UI / UX · Linux · Git / GitHub · Nginx · Docker · HTML / CSS · Tailwind CSS · JavaScript / TypeScript · Three.js / WebGL · Illustrator · Photoshop · Blender

LANGUAGES

Spanish · Expert · English · Advanced · German · Beginner

CERTIFICATIONS & LICENSES

2026 **C# (Basic)** · HackerRank

C# fundamentals: data types, control flow, collections and object-oriented programming.

2026 **Software Engineer** · HackerRank

Assessment of software engineering skills: problem solving, data structures, algorithms and code design.

2026 **Foundational C# with Microsoft** · freeCodeCamp

C# and .NET fundamentals programme in collaboration with Microsoft: syntax, OOP, collections, LINQ and unit testing.

2024 **EF SET English Certificate 58/100 (B2 Upper Intermediate)** · EF SET

B2 (upper intermediate) English level accredited through a standardised reading and listening test.

2021 **Front-End Development Libraries** · freeCodeCamp

Certification in front-end libraries: Bootstrap, jQuery, Sass, React and Redux.

2020 **Graphic Design Techniques** · CEDES

Training in applied graphic design: composition, colour and typography, with production in Adobe Photoshop, Illustrator and After Effects.

2020 **Responsive Web Design** · freeCodeCamp

Certification in responsive web design: semantic HTML, modern CSS, Flexbox, Grid and accessibility.

2018 **Audio Operator Course** · CEDES

Training in professional audio operation: mixing consoles, signal handling, monitoring and sound reinforcement.

2017 **Microcomputer Operator Course** · Joven Club

Training in microcomputer operation: operating system, office software, file management and basic networking.

2016 **Photo Editing and Retouching** · CEDES

Training in digital photo editing and retouching: developing, colour correction and retouching with Adobe Photoshop.

ADDITIONAL SKILLS & INTERESTS

Kanban · UML · Software Development Methodologies · Communication · Teamwork · Project management

I am interested in working with teams that have a creative mindset and efficient working dynamics, who adapt smoothly to circumstances, are not afraid of challenges and have a genuine interest in growing as a team. I adapt to any work methodology and software engineering process: Kanban, RUP, XP or Iconix.