



Árnelsen Arthur

Full Stack Developer & Data Engineer

📞 +55 (31) 998201264

✉ arnisenarthur@gmail.com

🔗 linkedin.com/in/arnelsen-arthur

👤 PROFILE

Versatile full-stack developer and data engineer with 8+ years of experience in software development, game development, and data-driven solutions. Expert in modern web technologies (React, TypeScript, Node.js) and data science (Python, SQL, data modeling). Proven track record in building scalable applications, multiplayer game systems, and data pipelines. Strong background in AI/ML integration, API development, and performance optimization. Passionate about solving complex problems through code and data.

I've always loved maths, logic and understanding how things work, starting with game development at age 13 (2013). This passion led me to pursue Information Technology and later a specialized Game Development degree. Over 8+ years, I've built expertise across the full stack: from React/TypeScript frontend applications to Python data pipelines, SQL database design, and AI/ML integrations. I've developed multiplayer games serving 1000+ concurrent players and enterprise systems used by 50+ institutions.

💼 EXPERIENCE

Senior Full-Stack Developer & Data Engineer

Monomyto Studio (2023 - Present)

- Developed multiplayer games using Photon Quantum engine serving 1000+ concurrent players with <50ms latency
- Built real-time analytics dashboard using Python, SQL, and React for game performance monitoring
- Integrated AI-powered matchmaking system using machine learning algorithms

Full-Stack Developer & Game Engineer

Lion Spoon Dream GT (2021 - 2022)

- Developed Unity-based games with complex gameplay mechanics and physics simulations
- Implemented multiplayer networking features and real-time synchronization for 500+ concurrent users
- Designed and implemented RESTful APIs for game data management and user authentication

Data Analyst & Full-Stack Developer

HDA Sistemas (Self-Employed) (2019 - 2021)

- Developed educational management platform used by 50+ institutions, handling 10,000+ student records
- Built data analytics dashboard using Python (Pandas/NumPy) and SQL for educational metrics
- Implemented machine learning model for student performance prediction (85% accuracy)

Robotics Programmer & Systems Engineer

FTC Robotics Competition (2017 - 2019)

- Won 'Best Programmer' award for innovative robot control systems and autonomous algorithms
- Developed computer vision systems using Python and OpenCV for object detection
- Implemented PID control algorithms and sensor fusion for precise robot navigation

Software Developer & Database Administrator

Freelance & Various Companies (2015 - 2017)

- Built scalable web applications with modern JavaScript frameworks (React, Node.js)
- Designed and implemented MySQL/PostgreSQL databases for enterprise applications
- Created RESTful APIs serving 1000+ daily requests with 99.9% uptime

🎓 EDUCATION

Information Technology

SENAI - Brazil (2017 - 2018)

Game Development Degree

PUC Minas - Brazil (2020 - 2024)

SKILLS

RESTful API Development • Database Design & Optimization • Server Architecture • Socket.io & WebSockets • AI API Integration • Data Modeling & Analysis • SQL Database Design • Full-Stack Web Development • Software Testing & QA • UI/UX Design & Prototyping

LANGUAGES

Portuguese - Native

English - Professional Working Proficiency

Spanish - Intermediate

AWARDS & RECOGNITION

FTC Best Programmer Award

First Tech Challenge Robotics Competition (2019)

OBA Silver Medal

Brazilian Astronomy Olympiad - National Level (2015)

Valedictorian

PUC Minas - Brazil (2024)

Final Thesis: Perfect score (100%)

PUC Minas - Brazil (2024)

PROJECTS

sCool PHP • SQL • JavaScript

sCool is a school management system created as a **Final Paper** for the IT course. With it you can manage student grades and warnings, separate them by class and send notes to students and their parents. You can also create events in the class calendar to let students know about upcoming tasks and any other kind of event.

HDA Sistemas Full-Stack • JavaScript • TypeScript

After the course, together with my professor and another friend, we created **HDA Sistemas**, a company that develops the most diverse systems and websites for local companies. It's one of my current jobs, along with the game developer job.

Arnilsen Arthur Portfolio HTML • CSS • JavaScript

My personal portfolio built with HTML, CSS and JavaScript. It's a simple portfolio that showcases my projects and skills.

Lapcode UI Toolkit HTML • CSS • JavaScript

Lapcode UI Toolkit is a pure CSS / JavaScript UI toolkit that provides a set of reusable UI components for web development.

AACL 3D Painter Node.js • Three.js • JavaScript

AACL 3D Painter is a powerful **3D painting application** built with Node.js and Three.js. Features include advanced **translation controls**, multiple **theming options**, sophisticated **layering system**, and intuitive 3D manipulation tools. Perfect for 3D artists and designers looking for a web-based painting solution.

NetBuff C# • Unity • Networking

A lightweight, high-performance networking library for Unity that simplifies multiplayer game development. Built from the ground up to provide better performance and easier implementation than existing solutions.

Lighting System Unity • C# • Tech Art

Implementation of a URP Lighting System that handles thousands of lights with a low impact on performance.

Takedown Legends Unity • C# • Multiplayer

Takedown Legends is a multiplayer arena-like shooter where you can choose from a variety of characters and fight in a 3v3 arena. It was created with the Photon's Quantum Engine and is a tech-art project.

Solis Unity • C# • Networking

A beautifully crafted cooperative puzzle platformer where two players control siblings on a journey through a post-apocalyptic world. The game emphasizes communication, trust, and creative problem-solving.

References available upon request

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