

Luan Lins

+55 87 981486931 luancsl95@gmail.com [linkedin.com/luan-lins-b5960570](https://www.linkedin.com/luan-lins-b5960570) github.com/luancsl

luanlins.dev.br

Experience

- Laboratório de Computação Embarcada e Tecnologias Industriais (LACETI-CIN)** Nov 2022 – present
Tech Lead - DevOps Developer Recife-PE, Brasil
 - Implemented a data lake for 76,000 IoT devices using MQTT, Apache NiFi, MinIO (S3), Kafka, and Spark. Integrated Jupyter, MLflow, and KServe for analytics and ML. Managed infrastructure with Terraform. The system processes data in real time and in batch mode, offering scalability and flexibility.
 - Built a CI/CD pipeline using CircleCI and ArgoCD, reducing deployment time by 40% and ensuring consistent and reliable releases.
 - Led a cross-functional team of 6 in implementing a second version of a manufacturing line execution system (MES) using React and Node.js, resulting in a 25% performance increase.
- Laboratório de Computação Embarcada e Tecnologias Industriais (LACETI-CIN)** June 2021 – Nov 2022
Software Engineer - Fullstack Developer Recife-PE, Brasil
 - Contributed to the development of a Manufacturing Execution System (MES) for a lead-acid battery production line, using a modern technology stack that included React, GraphQL, and Node.js. As part of an agile team, I developed responsive user interfaces, implemented efficient APIs and GraphQL services, and integrated real-time data from the production line.
 - implemented automated testing for front-end applications, achieving 90% coverage. Using Cypress for end-to-end testing and Jest for unit testing, he developed a suite that ensured the functional integrity of the application.
 - Optimization of data synchronization between production line sensors and cloud systems using a caching system with Redis and Node.js. The solution reduced latency in data transmission and improved synchronization reliability.
- Laboratório Multidisciplinar de Tecnologias Sociais (LMTS)** May 2019 – June 2021
Software Engineer - Fullstack Developer Garanhuns-PE, Brasil
 - Developed 'VacinaGaranhuns', a React system with Google Maps for controlling and scheduling COVID-19 vaccinations, serving 12,000 people. Implemented geolocated visualization of posts, online scheduling, and a module for home vaccination. Optimized vaccine distribution and efficiency of the municipal campaign.
 - Led the development of a smart irrigation system with React Native and Node.js, integrating meteorological APIs and IoT devices. Uses advanced analytics for accurate evapotranspiration calculation, resulting in 62% reduction in water consumption for small farmers.

Education

- Universidade Federal de Pernambuco** Expected Oct 2024
Master's Degree in Computer Science Recife-PE, Brasil
- Universidade Federal Rural de Pernambuco** July 2021
Bachelor's Degree in Computer Science Garanhuns-PE, Brasil
 - Relevant:** Monitor in the discipline of Operating Systems, Distributed Systems

Projects

- Smart Irrigation API (SIA)** | Node.js, Express.js, MongoDB, Jest, Cheerio
 - Designed and implemented a RESTful API for integrating multiple climate data providers, using geographic coordinates as the main parameter.
 - Developed an efficient caching system that optimized performance, allowing fast access to regional climate data without the need for frequent recalculations, resulting in a significant 30% reduction in API response time.
- Smart irrigation application (GrowApp)** | React-Native, Google Maps, Jest, Watermelondb

- Developed a mobile application in React Native with Google Maps to optimize agricultural irrigation. The system integrates real-time evapotranspiration calculations and IoT devices, resulting in a 62% reduction in water consumption for small rural producers.
- Built a LoRa mesh network for actuator devices in remote agricultural irrigation areas, significantly expanding the coverage and efficiency of field irrigation systems.
- Developed an intuitive device discovery system integrated with a mobile app, simplifying network setup and management for end users.

TaxiCar Simulator | *React, Google Maps, D3.js, Uber H3*

- Developed a simulator to optimize driver-passenger matching using complex geospatial algorithms.
- Implemented and evaluated several matching methods, including the Hexagonal Hierarchical Geospatial Indexing System (Uber H3). The simulator allowed comparative analysis of efficiency in real scenarios, considering multiple positioning variables on the map.

Technical Skills

Languages: JavaScript, TypeScript, Python, Java, C, C#

Technologies: React.js, React Native, Node.js, GraphQL, API RESTful, Docker, Kubernetes, AWS, Apache Spark, Apache Kafka, Apache NiFi, PyTorch, MLflow, KServe.

Concepts: Agile Methodology, Scrum Methodology, Git, SOLID, Clean Code, TDD, CI/CD, Microservices, Observability, SQL, NoSQL, Database Normalization, Machine Learning, Cloud Computing, Virtual Machine.

Soft Skills: Leadership, Effective communication, Teamwork, Problem solving, Critical thinking, Adaptability, Time management.

Spoken Languages: Portuguese (Native), English (Intermediate).

Certifications

Build Basic Generative Adversarial Networks (GANs) <i>U8RM8PPNTK4Y</i>	Jun 2021
--	----------

Patents

Actuation Device for Smart Irrigation in ESP32 (GrowConnect) <i>BR BR512020002154-9</i>	July 2020
Smart Irrigation API (SIA) <i>BR BR512020001505-0</i>	June 2020
Smart irrigation application focused on evapotranspiration and climate (GrowApp) <i>BR BR512020001504-2</i>	May 2020
Application for managing meteorological stations and calculating reference evapotranspiration (EvApp) <i>BR BR512020001500-0</i>	Feb 2020

Publications

Stochastic Modeling for Assessing the Reliability and Availability of Drone-Based Surveillance Systems <i>Luan Lins, Erick Nascimento, Jamilson Dantas, Jean Araujo, Paulo Maciel</i> 10.1109/SysCon61195.2024.10553470	Jun 2024
Performance Modeling of Microservices with Circuit Breakers using Stochastic Petri Nets <i>Thiago Pinheiro, Marco Mialaret, Paulo Pereira, Luan Lins, Daliton Silva, Jamilson Dantas, Paulo Maciel</i> 10.1109/SysCon61195.2024.10553490	Jun 2024
Experimental Evaluation of Software Aging Effects in a Container-Based Virtualization Platform <i>Felipe Oliveira, Jean Araujo, Rubens Matos, Luan Lins, André Rodrigues, Paulo Maciel</i> 10.1109/SMC42975.2020.9283358	Oct 2020