André Lamelas

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About Me

I am André Lamelas, a software engineer with 17 years of professional experience doing what I enjoy most: solving problems through technology. I feel comfortable across the entire development stack and I thrive on challenges. Whether architecting a large-scale system or uncovering the secrets of a long-neglected codebase, I always bring my curiosity and persistence to every project.

Technical Skills

AWS: EC2, ECS, S3, IAM, Lambda, RDS, CloudFront, Glue, Athena, DynamoDB
DevOps: Docker, Terraform, Azure DevOps, Jenkins, GitHub Actions
Web: Drupal, Wordpress, HTML, CSS/SASS/SCSS
Mobile: React Native, Expo, SwiftUI, Flutter, Kotlin
Frameworks/Platforms: Node.js, React, Laravel, Django
Databases: MySQL, PostgreSQL, Percona, MariaDB, Redis, MongoDB, Elasticsearch
Languages: Python, PHP, JavaScript/TypeScript, Ruby, Swift, Java, C#

Professional Experience

United Nations World Food Programme

Solutions Architect, 2022 - Present

- Served as Solutions Architect for several projects, including WFP's intranet and several external-facing websites.
    - Designed and implemented AWS infrastructure using Terraform
    - Built CI/CD pipelines in Azure DevOps
    - Supported development teams to cover skill gaps
    - Designed software architecture and data models
    - Ensured compliance with WFP standards and maintained high-quality technical solutions
    - Provided guidance and direction to development teams as needed
    - Acted as Product Owner and Scrum Master when required
- Led the Wellbeing project, a 9-agency platform (web and mobile applications) dedicated to the wellbeing of UN employees and their families:
    - Managed vendor relationship
    - Planned and detailed the migration process
    - Reimplemented the complex AWS infrastructure using Terraform
    - Built CI/CD pipelines in Azure DevOps for all agency web instances (production and development)
    - Executed the migration of all web instances and mobile applications on schedule
    - Implemented a custom media transformation CDN (Lambda@Edge, Python, CloudFront, S3) to replace Cloudinary, Imgix, and Mux
    - Coordinated the new development team during the refactoring phase to ensure compliance with WFP standards
- Led the design and implementation of the WFP Monitoring Handbook mobile application:
    - Designed and implemented the overall architecture
    - Developed a Drupal-based proxy to integrate with Document360 content

- Built CI/CD pipelines in Azure DevOps for both the proxy and mobile applications
- Managed and collaborated with the React Native development team
- Acted as project manager/product owner during development

United Nations World Food Programme
Web Developer and Technology Lead, 2010 - 2022

- Led the evolution of the Logistics Cluster website from Plone to Drupal 7 and later to Drupal 8/9:
    - Requirements specification, data modeling, information architecture, UI/UX workflows
    - Infrastructure implementation and maintenance (AWS EC2, RDS, S3, Route 53, CloudFront, WAF)
    - Managed a small development team (Drupal developer and graphic designer)
    - Coordinated migrations and relationships with external vendors
    - Developed backend (Drupal, Elasticsearch) and frontend (Twig, SCSS, JavaScript)
- Oversaw the transformation of the Digital Logistics Capacity Assessments (DLCA) and the Logistics Operational Guide (LOG) from PDF to Confluence and eventually to a custom Drupal-based platform
- Modernized and redeveloped the United Nations Humanitarian Response Depots (UNHRD) website from Drupal 7 to Drupal 9
- Implemented the new UNHRD Partner and Staff Portal (Drupal 8/9)
- Built a Laravel-based dashboard to display real-time UNHRD logistics operations and activities
- In response to Covid-19, created the CHOCOLAT platform to consolidate partners' cargo transport needs and offers
- Co-developed EDUARDO, a cargo-flight search engine with UPS and Google, supporting partners' global transport needs
- Contributed to the development of the Relief Item Tracking Application (RITA), a core Logistics Cluster tool for cargo tracking
- Developed the Logistics Cluster iOS app (iOS 5), providing offline access to products including interactive maps
- Built the mobile web version of the Humanitarian Early Warning System (HEWS) using jQuery Mobile and ASP.NET
- Administered the GIS GeoServer instance used for field logistics information sharing
- Maintained the original Logistics Cluster server hosting Drupal sites, WebDAV, Mailman, and related services

Ao Dispor
Co-founder and CTO, 2014 - 2018

Co-founded and served as CTO of Ao Dispor, a nonprofit startup offering an online marketplace for services: oversaw all technical development, designed and built the web components (Laravel), developed the native iOS/Android mobile apps (Swift/Java), implemented the advanced, location-based search engine (Elasticsearch). Conceived and deployed several growth-focused technology solutions, including large-scale ad campaigns with municipal authorities. In an effort to maximize code reuse, initiated a full rewrite of web and mobile apps using React and React Native. Managed a small team developing the Android app and a web prototype in partnership with the Faculty of Engineering, University of Porto (Coding for Social Impact project).

OPT – Organização e Planeamento de Transportes
Software Engineer, 2018 - 2020

Contributed to the development of a new Demand Responsive Transport (DRT) platform from inception to pilot phase: defined requirements, modeled domain data structures, developed both frontend (React) and backend (C#, ASP.NET Core), built and delivered the mobile application for the bus drivers (React Native) and implemented the route optimization algorithm leading to increased route planning efficiency. Enhanced the company's schematic diagram generation application by improving the algorithm, usability and output quality.

Scroll - Interactive Play for Smartphones
Software Engineer, 2019

Designed, planned and implemented all the technical components of Scroll, an interactive theatre experience for smartphones. Delivered a cross-platform React Native app (iOS and Android) with native features like location-based tracking and push notifications. The backend for managing the play was built using Drupal.

PT Inovação (Altice Labs)
Software Engineer, 2008 - 2009

Built a Ruby on Rails wiki platform with a custom jQuery-based WYSIWYG editor. Developed a real-time monitoring system in Java (Google Web Toolkit) to support KPI analysis for large telecom companies, integrated with Apache ServiceMix (SOA) and using complex Event Processing tools (Apache Camel, ActiveMQ)

Education

Faculdade de Engenharia da Universidade do Porto, Portugal
Master in Informatics and Computing Engineering, 2003 - 2008

Main topics: Software Engineering, Web Development, Algorithms and Data Structures, Computer Graphics, Project Management, Software Development Processes, Artificial Intelligence, Computer Networks, Operating Systems, Distributed Systems, Computer Architecture, Operations Research, Databases, Markup Languages, Sound and Video Editing

Languages

Portuguese: Mother tongue
English: Full professional proficiency
French: Limited working proficiency
Italian: Limited working proficiency

Interests

Gastronomy, board games, history, art, architecture