DERICK BESSA

Junior Mobile/Web & AI Engineer

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PROFESSIONAL SUMMARY

Full-stack Software Engineer with **2+ years** of experience developing **AI-powered applications** and **end-to-end scalable systems** for web and mobile. Proven expertise in architecting **Computer Vision systems (SFA - Federal Automotive Scanner)** in production, including **image ingestion, embeddings generation, CNN models (YOLO)** for edge detection, advanced pre- and post-processing, and **OCR-based character recognition** integrated with a **structured backend** (Java/Spring Boot) and **relational databases** (PostgreSQL/SQLite), achieving **85%+ query performance improvement** over conventional methods. Professional proficiency in **TypeScript/Angular and JavaScript/React frontend**, **Java/Spring Boot backend** (REST/GraphQL APIs, authentication) and **PostgreSQL**. Delivered **automated web and mobile deployments** with **CI/CD pipelines in Vercel and GitHub Actions**, accelerating feature delivery and ensuring production stability. Additionally, optimized interface flows on a **language learning platform**, increasing **speed by 60%** and reducing **support requests by 45%**, directly impacting **productivity, user retention**, and **recurring revenue**.

TECHNICAL SKILLS

AI & Computer Vision: MediaPipe, OCR, YOLOv8 & YOLOv11, PyTorch, Data Augmentation, Early Stopping, Embeddings Generation, Recognition and Classification Models (BBox, Poses, Keypoints, Faces)

Languages & Frameworks: TypeScript, JavaScript, Angular, React, Java, Spring Boot, HTML/SCSS, TailwindCSS

Database & Backend: PostgreSQL, SQLite, REST & GraphQL APIs, Authentication

DevOps & CI/CD: Docker, GitHub Actions, Vercel, Automated Deployment

Testing & Quality: React Testing Library, Postman, TDD, Agile (Trello & Jira)

PROFESSIONAL EXPERIENCE

LABVICIA – IFCE | Campus Fortaleza   *2025 – Present*
Fullstack Developer & AI Engineer

- Led **internationalization of the system into 4 languages**, significantly increasing **platform scalability and global reach**.
- Improved **UI/UX and performance** using **TypeScript, Angular, and Java/Spring Boot**, including **component modularization**, styled pagination, REST request optimization, and PostgreSQL query improvements, resulting in **60% faster screens** and **40% fewer unnecessary DB calls**.
- Applied **agile methodologies**, detailed technical reporting, feedback loops, and system maintenance, ensuring **clean code**, **layered architecture**, and **long-term scalability**.
- Delivered **performance optimizations and modularization** accelerating internal processes by **85%**, improving **operational efficiency, user retention**, and direct impact on **recurring revenue**.

LAPISCO – IFCE | Campus Fortaleza   *2024 – Present*
AI & Computer Vision Researcher

- Developed **CNN models** using **YOLO and MediaPipe** for detecting **objects, edges, and hands**, applying **pre-processing with OpenCV, Data Augmentation, and Early Stopping**, reaching

85% accuracy and precision levels between **90%-97%** in recognition and classification tasks.

- Initiated research for **inclusion of deaf users**, testing CNNs, VLMs, and LLMs for automatic translation of **Brazilian Sign Language (LIBRAS)**, with plans to integrate **backend and frontend** into a user-friendly interface.
- Contributed to building a **company function display application**, leading **Dart/Flutter frontend** and implementing **general object detection** using YOLO with a robust Kaggle dataset, ensuring real-world performance and reliability.
- Organized and documented technical processes, optimizing **development workflow** and integrating **Machine Learning, Deep Learning, and Digital Image Processing** in applied projects.

TáNaLista – Founded & Led Project   *2026 – Present*
Founder & Lead Engineer

- Conceived and currently leading development of **TáNaLista**, an in-development event guest management platform, leveraging **Artificial Intelligence (AI) and Machine Learning (ML)** for **secure and intelligent check-in** via QR Code, **facial recognition**, and **fingerprint scanning**.
- Designing full-stack architecture with a **robust backend** (relational database) and **intuitive frontend** (web & mobile), structuring differentiated permissions for **organizer, ADM, and staff**, focusing on **scalability and full event customization**.
- Implementing advanced **Computer Vision** features using **YOLO and MediaPipe** for detecting **faces, hands, and fingerprints**, integrated with real-time validation to enable **automated secure check-in** and fraud prevention.
- Developing an **intelligent chatbot** integrated with the platform, leveraging AI for automated guest support, answering queries, and proactive event notifications.
- Planning **comprehensive event management** features, including automatic notifications, gift lists, recurring guest tracking, company/group management, and full event personalization, optimizing organizer and guest experience.
- Organizing project structure following **best coding practices, modularization, and CI/CD pipelines**, ensuring **simplified maintenance, easy AI/ML integration**, and scalability for high-complexity events.

EDUCATION & LANGUAGES

Bachelor in Computer Science | IFCE - Macaracanaú Campus | 2024 - ongoing

Languages: English (Advanced), Portuguese (Native)