DERICK BESSA

Dev Fullstack & AI Engineer

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PROFESSIONAL SUMMARY

Full-stack & AI Engineer with **1+ year of experience** developing **end-to-end scalable systems** for **web and mobile** with a focus on **Artificial Intelligence models**. Proven experience designing **Computer Vision systems SFA (Federal Automotive Scanner)** in production, with **image ingestion, embedding generation, CNN models (YOLO)** for edge detection, advanced image pre- and post-processing, and **OCR-based character recognition** integrated with a **structured backend** (Java/SpringBoot) and **relational database** (PostgreSQL/SQLite), achieving **+85% query performance optimization** compared to conventional methods. Professional proficiency in **TypeScript/Angular and JavaScript/React frontend**, **Java/Spring Boot backend** (REST/GraphQL APIs, authentication) and **PostgreSQL**. Executed **automated web and mobile application deployment** using **CI/CD pipelines on Vercel and GitHub Actions**, **accelerating feature delivery** and **ensuring production stability**. Additionally, at a contracted company, optimized interface flows in a **language learning platform**, increasing **usage speed** by **60%** and reducing **support requests** by **45%**, generating a direct impact on **productivity**, **user retention** and **recurring revenue**.

TECHNICAL SKILLS

AI & Computer Vision: MediaPipe, OCR, YOLOv8 & YOLOv11, Pytorch, Data Augmentation, Early Stopping, Embedding 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 APIs, GraphQL, Authentication

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

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

PROFESSIONAL EXPERIENCE

LABVICIA – IFCE | Campus Fortaleza   *2025 – Present*
Full-stack Developer & AI Engineer

- Led **system internationalization in 4 languages**, significantly increasing **platform scalability and global reach**.
- Developed **UI/UX and performance improvements** using **TypeScript, Angular and Java/Spring Boot**, including **component modularization**, styled pagination, optimized REST requests and PostgreSQL queries, resulting in **60% faster screens** and **40% fewer unnecessary database calls**.
- Applied **Agile methodologies**, detailed technical reports, feedback loops, and system maintenance, ensuring **clean code**, **layered architecture** and **long-term scalability**.
- Delivered **performance optimizations and modularization** that accelerated internal processes by **85%**, improving **operational efficiency**, user retention, and directly impacting **platform recurring revenue**.

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

- Developed **CNN models** using **YOLO and MediaPipe** for **object, edge, and hand detection**, applying **OpenCV preprocessing, Data Augmentation and Early Stopping**, achieving **85% accuracy** and precision between **90%-97%** in recognition and classification tasks.
- Started research on **inclusion for deaf people**, testing and using CNNs, VLMs and LLMs for automatic detection and translation of **Brazilian Sign Language (LIBRAS)**, aiming to build an integrated **backend and frontend system** with an intuitive, user-friendly interface.
- Contributed to a **company feature display application**, leading the **frontend in Dart/Flutter** and implementing a **general object detection feature** using YOLO with a robust Kaggle dataset, ensuring performance and reliability in real test environments.
- Organized and documented technical processes, optimizing **development workflow** and integrating **Machine Learning, Deep Learning, and Digital Image Processing** practices into applied projects.

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

- Designed and lead the development of **TáNaLista**, an event access and guest management platform, using **AI & ML** to ensure **secure and intelligent check-in** via QR Code, **facial recognition** and **fingerprint authentication**.
- Architected a **full-stack system** with robust backend and intuitive web & mobile frontend, structuring differentiated permissions for **organizer, admin, and staff** with focus on **scalability and full event customization**.
- Implemented advanced **Computer Vision** features using **YOLO & MediaPipe** for detecting **faces, hands, and fingerprints**, integrated with real-time validation for **secure automated check-in** and fraud prevention.
- Developed an **intelligent chatbot** integrated into the platform for automated guest support and proactive notifications regarding absent guests.
- Included full **event management features**, including automatic notifications, gift lists, recurring guest history, companion tracking, and full event personalization, optimizing both organizer and guest experience.
- Structured the project following **best coding practices, modularization, and CI/CD pipelines**, ensuring **easy maintenance, integration of new AI/ML features**, and scalability for complex events.

EDUCATION & LANGUAGES

Bachelor's in Computer Science | IFCE - Macaracanaú Campus | 2024 - Present

Languages: English (Advanced), Portuguese (Native)