

DERICK BESSA

Dev Fullstack & AI Engineer

derickbessa12@gmail.com | github.com/DerickBessa | Portfolio

PROFESSIONAL SUMMARY

Fullstack Developer & AI Engineer with +1 year of professional experience, specialized in building scalable systems and Computer Vision-based predictive automation solutions. Led the architecture and development of **SFA (Federal Automotive Scanner)**, a production-ready computer vision system featuring image ingestion pipelines, embedding generation, **YOLO-based edge detection models** and **OCR** for character recognition, integrated with a structured **Java/Spring Boot backend** and **relational databases (PostgreSQL/SQLite)**, achieving an **85% performance optimization** in database queries.

Experience in frontend development with **TypeScript (Angular)** and **React**, backend development using **Java/Spring Boot** (REST/GraphQL APIs and authentication), and structuring **CI/CD pipelines with GitHub Actions and Vercel** for automated deployments. Optimized UI flows in an educational platform, resulting in a **60% increase in screen responsiveness** and **45% reduction in support requests**, directly impacting **user retention** and **recurring revenue**.

TECHNICAL SKILLS

AI & Computer Vision: YOLOv8, YOLOv11, PyTorch, MediaPipe, OCR, Embedding Generation, Data Augmentation, Object Detection Models (Bounding Boxes), Pose Estimation, Keypoints, Facial Recognition

Frontend: TypeScript, JavaScript, Angular, React, HTML, SCSS, Tailwind CSS

Backend: Java, Spring Boot, REST APIs, GraphQL, Authentication & Authorization

Databases: PostgreSQL, SQLite

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

Testing & Methodologies: React Testing Library, Postman, TDD, Agile Methodologies (Scrum, Kanban, Trello, 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)