

Lucas de Paula

Software Engineer

Software engineer with 5+ years of experience building autonomous systems and real-time applications deployed in the field. Co-founded a drone tech startup used in wildfire detection and search & rescue missions across the world. Well-versed in C++ and Android UIs, with published research in AI-driven aerial robotics.

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PROFESSIONAL DEVELOPMENT

ROBOTTO CO. – Aalborg, Denmark	Co-founder and Software Developer	Feb 2019 - Oct 2024
<ul style="list-style-type: none">FireAI (Autonomous Drone Missions)<ul style="list-style-type: none">Built C++ backend for autonomous drones missions which detect wildfires using DJI M300 & NVIDIA Jetson.Enabled early fire detection with 90+% average accuracy across diverse environments.OmniSight (Search & Rescue System)<ul style="list-style-type: none">Developed embedded C++ modules for autonomous navigation in complex terrains.Integrated feedback from GRAF firefighters and WWF personnel to enhance usability.Android Ground Control App (FireAI & OmniSight)<ul style="list-style-type: none">Built a custom Android app for drone control and real-time telemetry visualization using Java.Collected user feedback from field operators often shipping QoL updates.TileElevation<ul style="list-style-type: none">Engineered a real-time elevation map utility to prevent terrain collisions.Adopted in all company missions, reducing crash risk during autonomous flight to nearly zero.		

SKILLS

<ul style="list-style-type: none">Languages: C++, Java, Python, SQL, C#Technologies: OpenCV, JSON, XML, REST APIsTools: Git, Docker, CMake, GradlePlatforms: Linux (Ubuntu, Fedora), NVIDIA Jetson, Android, Raspberry PiPractices: Agile (Scrum/Kanban), CI/CD, Field Testing, UX Feedback Integration
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EDUCATION

AALBORG UNIVERSITY – Aalborg, Denmark	Bachelor of Robotics	Aug 2016 – Aug 2019
<ul style="list-style-type: none">Focus: Control systems, autonomous navigation, human-robot interaction.Capstone: AI-based drone platform for wildfire mapping using monocular vision.		

PERSONAL PROJECTS

<u>TOUCHPAD VOLUME CONTROL</u>
Developed a Fedora desktop utility to control volume via touchpad gestures using ALSA.
<u>BUFF SNAKE (MULTIPLAYER GAME)</u>
Created a gym-themed multiplayer Snake game featuring unique mechanics and "buffing" effects.

ADDITIONAL

PUBLICATIONS			
<ul style="list-style-type: none"><u>“Estimation of Wildfire Size and Location using a Monocular Camera on a Semi-Autonomous Quadcopter” ICVS (2019)</u><u>“A Framework for Wildfire Inspection Using Deep Convolutional Neural Networks” SII (2020)</u>			
LANGUAGES			
English C2 (Fluent)	Portuguese C2 (Native)	Spanish B2 (Intermediate)	Danish A1 (Basic)
VOLUNTEERING			
<ul style="list-style-type: none">Cheetah Conservation Volunteer – South Africa, 2016			