

HOANG LONG DUONG

Robotics, Vision & Embedded AI Engineer

+33 7 69 51 26 55 | longduong1608@gmail.com | Toulouse, France

Final-year engineering student in Robotic and Interactive Systems. Specialized in computer vision, image processing and 3D, multi-sensor perception, autonomous navigation and embedded systems. R&D experience in modeling, simulation and ROS 2 integration.



EDUCATION

2023 — 2026

Engineering Degree

Robotic and Interactive Systems
UPSSITECH, Toulouse

2022 — 2023

CUPGE (Computer Science)

UPSSITECH, Toulouse

2020 — 2022

Preparatory Cycle (STPI)

INSA Rennes

SKILLS

Programming

Python | C++ | Bash

Simulation & Modeling

MATLAB | Simulink | Blender | Gazebo

Robotics

ROS 2 | Arduino | SLAM | Nav2

Vision & 3D

OpenCV | 3D Perception | Image Processing

Artificial Intelligence

Deep Learning | PyTorch | YOLO | TensorRT | NLP

Tools

Git | Docker | AWS | Linux

LANGUAGES

French Fluent

English B2 (TOEIC: 800)

Vietnamese Native

PORTFOLIO



hoang-long-duong-en.pages.dev

EXPERIENCE & PROJECTS

R&D Internship — Visual navigation of an urban drone without GNSS

Mar 2026 - Aug 2026

Astek | Paris, France

- Project scoping, state of the art and problem formulation on multi-camera visual odometry.
- Analytical modeling and Python simulation of trajectory estimation performance.
- Experimental validation on real images and video streams.

PGE Project — Perception & Embedded AI for Autonomous Vehicle

Sep 2025 - Feb 2026

autOCampus | Toulouse, France

- Multi-model pipeline optimized with TensorRT FP16 on Jetson Orin NX: object detection (YOLO), road segmentation (TwinLiteNet), traffic light classification.
- ROS 2 node for LiDAR-Camera fusion for 3D obstacle estimation.

Internship — Automated 3D Morphological Analysis Pipeline

Apr 2025 - Aug 2025

Vectory3 | Voorburg, Netherlands

- Blender add-on (Python) for automated 3D scan analysis and measurement extraction.
- End-to-end AWS cloud integration (S3, Lambda, EC2, DynamoDB) for pipeline automation.

TER Project — Embedded Posture Monitoring System

Nov 2024 - Apr 2025

UPSSITECH & Vectory3 | Toulouse, France

- Arduino (Nano 33 BLE) data acquisition and Bluetooth Low Energy transmission to PC.
- Real-time angular deviation calculation between 2 IMU sensors and Python GUI (Tkinter).
- Session visualization via Streamlit web application (SQLite).

Capstone Project — Autonomous Mobile Robot Design

Sep 2023 - May 2024

UPSSITECH | Toulouse, France

- Real-time LiDAR mapping and dynamic object tracking using computer vision.
- Raspberry Pi / Arduino control with interface, real-time video streaming and voice commands.

Team Member

Oct 2022 – Feb 2026

Burger King | Toulouse, France

- Teamwork and adaptability to different positions (cashier, food preparation, kitchen).