



SALUSECURITY

PFF BOOK 2025

call for interns

WHEN EYES GO HEAVY, WE STAY READY



TABLE OF CONTENTS

- WHO ARE WE
- OUR MISSION
- INTERNSHIP TOPICS
- HOW TO APPLY



ABOUT US

SALUSECURITY is a startup founded in 2022, based in Sousse, revolutionizing automotive technology with an AI-powered, proactive approach to road safety.

SALUSECURITY's goal is to mitigate the risks of road accidents, with a particular focus on addressing drowsy driving. Our innovative solution transcends mere detection by implementing proactive measures that intervene to prevent potential dangers before they escalate, thereby safeguarding drivers and enhancing overall road safety.

Our offerings include the SALUSECURITY System, an AI-enhanced platform that combines real-time driver monitoring with advanced risk assessment algorithms, and SALUSECURITY Vision, a computer vision tool seamlessly integrated into vehicles to ensure continuous vigilance. Complementing these is the SALUSECURITY App, a dynamic mobile application designed for security, gamification, and education. The app not only serves as a control hub but also engages users with interactive features that promote safe driving habits through rewards and educational modules.

SALUSECURITY

S

INCUBATOR



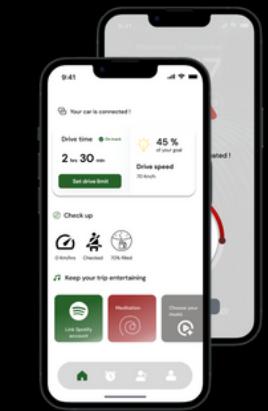
NATIONAL ENGINEERING SCHOOL OF SOUSSE

SALUSECURITY



OUR MISSION

- Deliver a comprehensive system to prevent road accidents and enhance road safety for all drivers.



- Ensure real-time driver safety through AI-powered monitoring and proactive risk detection.
- Promote safe driving with gamified rewards, educational tools, and security features.

SALUSECURITY



#PR01: DEVELOPMENT OF A REAL TIME DRIVER BEHAVIOR DETECTION SYSTEM

Project Description:

Develop and deploy AI-based systems for Driver Behavior Detection. This role focuses on building machine learning models for detecting dangerous driving behaviors, such as drowsiness and distractions.

Key Responsibilities:

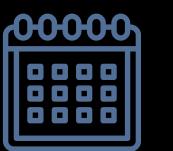
- Develop machine learning models to detect drowsiness, distractions, and careless driving using visual data.
- Work with MediaPipe for pose detection and YOLO for object detection (e.g., seatbelt, mobile phones,...)
- Build real-time alert systems that notify the driver with audio or visual warnings.
- Optimize models for real-time performance and low latency.
- Develop APIs to integrate the detection models into the driver interface.

Required Skills:

- **Strong knowledge of Python and ML frameworks (e.g., TensorFlow, PyTorch, scikit-learn...)**
- **Experience with computer vision tools, including OpenCV, MediaPipe, and YOLO.**
- **Ability to work on real-time systems and optimize models for performance.**
- **Experience with API development (FastAPI).**
- **Passion for AI and autonomous driving technologies.**



: 1 Intern



: 4-6 Months



: Hybrid

SALUSECURITY



#PR02: DEVELOPMENT OF A VOICE ASSISTANCE WITH RAG AND MULTI-AGENT SYSTEM

Project Description:

Development of an advanced voice assistant system for our Driver Monitoring System. The ideal candidate will have a strong background in Large Language Models (LLMs) and multi-agent systems and will be responsible for building intelligent, context-aware responses and integrating Retrieval-Augmented Generation (RAG) into the system.

Key Responsibilities:

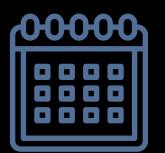
- Develop a voice assistant system that provides real-time feedback and safety suggestions to drivers.
- Implement RAG to retrieve relevant information dynamically and provide accurate and context-aware responses.
- Integrate voice interactions using speech recognition and text-to-speech technologies. Manage a multi-agent system to ensure effective communication between different components.
- Develop APIs for seamless integration between the voice assistant and behavior detection modules.

Required Skills:

- **Strong knowledge of Python and AI frameworks (Hugging Face, TensorFlow, PyTorch).**
- **Experience with Large Language Models (LLMs) and RAG systems.**
- **Experience with speech recognition (SpeechRecognition) and text-to-speech systems (pyttsx3, gTTS).**
- **Familiarity with multi-agent frameworks (CrewAI, LangGraph, LlamaIndex).**
- **Experience in API development (FastAPI).**



: 2 Interns



: 4-6 Months



: Hybrid

SALUSECURITY



#PR03: UI/UX DESIGN FOR THE SALUSECURITY MOBILE APP

Project Description:

Create an engaging, intuitive, and user-friendly design for the SALUSECURITY mobile application, focusing on driver engagement. The project involves designing the app's interface to align with SALUSECURITY's mission of promoting road safety while ensuring an exceptional user experience.

Key Responsibilities:

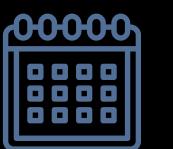
- Conduct user research and create user personas to inform design decisions.
- Develop wireframes, prototypes, and high-fidelity designs for the mobile application.
- Design gamified interfaces that reward safe driving habits and enhance user engagement.
- Ensure a seamless user journey through intuitive navigation and interactive elements.
- Collaborate with the development team to ensure designs are feasible and effectively implemented.

Required Skills:

- Proficiency in design tools (e.g., Figma, Adobe XD, Sketch...)
- Strong knowledge of UI/UX principles and best practices.
- Experience in creating wireframes, prototypes, and high-fidelity mockups.
- Understanding SALUSECURITY principles and its applications in UI design.
- Ability to perform user testing and incorporate feedback into designs.



: 1 Intern



: 4-6 Months



: Hybrid

SALUSECURITY



#PR04: SALUSECURITY MOBILE APP DEVELOPMENT

Project Description:

Develop a cross-platform mobile application to support SALUSECURITY's Driver Monitoring System. The app will feature driver identification, gamified elements, educational modules, and real-time user engagement tools, ensuring functionality and security while providing a seamless experience.

Key Responsibilities:

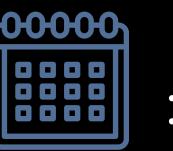
- Develop a fully functional mobile app for both Android and iOS platforms.
- Implement gamification features, educational modules challenges and road safety guidelines.
- Implement backend functionality to manage user data, analytics, and content delivery.
- Ensure robust user authentication and secure data storage.
- Optimize app performance and ensure compatibility across devices.

Required Skills:

- **Proficiency in mobile app frameworks (e.g., Flutter, React Native,...).**
- **Strong backend development skills (e.g., Node.js, Django,...).**
- **Experience in creating and integrating APIs.**
- **Knowledge of secure user authentication methods and data storage.**
- **Familiarity with cloud platforms like Firebase, AWS, or Google Cloud for backend services.**



: 2 Interns



: 4-6 Months



: Hybrid

SALUSECURITY



HOW TO APPLY

Interested candidates are invited to apply through the following form by the
20th of December 2024 : https://bit.ly/SALUSECURITY_PFE_FORM_2025

***Please note that applications will only be accepted through this form.**

You will be required to provide some basic information, upload your CV,
and specify the project and position you are applying for.

All applicants will be contacted via email after the application period closes.
Most importantly, we are looking for passionate, dynamic individuals eager to
contribute to innovative road safety solutions and grow with us.

For any inquiries, feel free to reach out to us at
mohamedaziz.mhalla@outlook.com.

SALUSECURITY

THANK YOU

EMAIL

mohamedaziz.mhalla@outlook.com

ADDRESS

- Pôle technologique de Sousse,
Ecole nationale d'ingenieur de
sousse, sousse, 4054, TN

PHONE

+216 23 399 329

WEBSITE

www.salusecurity.com

SALUSECURITY

