

Silicon Mobility

Internship

E-motor control software application development
for electric motorbikes
(SM-STC009 / 2023)

What we offer

Company	<p>SILICON MOBILITY SAS (<i>registration number 815 085 659 000 RCS Grasse</i>) <u>Head office</u> : Les Aqueducs – Bât 2 – 535, route des Lucioles – 06560 Valbonne Sophia-Antipolis</p> <p>The Automotive industry is living a revolution. Electrification, autonomous driving, diverse mobility, and connectivity are trends that are changing the industry’s rules. Among all decisive topics revolutionizing cars in the next future, Silicon Mobility is committed to supporting the rapid advent of electric and hybrid cars.</p> <p>Silicon Mobility is a technology leader for cleaner, safer, and smarter mobility. The company designs, develops and sells flexible, real-time, safe, and open semiconductor solutions for the automotive industry used to increase energy efficiency and reduce pollutant emissions while keeping passengers safe.</p> <p>We are looking for a motivated candidate to join our company in Sophia-Antipolis on the French Riviera. Please contact us: internship2023@silicon-mobility.com</p>
Offer ref.	SM-STC 009-2023
Subject – Offer title	Motor control software application development for electric motorbikes
Duration	5-6 months– between February/March/April and September 2022
Work hours	35 hours per week, job location at Silicon Mobility office
Education	Last year of Master (BAC+5 or equivalent)
Content/ mission	<p>As part of the FAE team, the apprentice will participate in the development of a proof of concept of a control application of e-motor for electric motorbikes using Silicon Mobility’s OLEA® solution. The OLEA® solution includes the OLEA® FPCU System-on-Chip dedicated to automotive applications, OLEA® COMPOSER software design flow, and OLEA® APP INVERTER control application.</p> <p>During the apprenticeship period, several tasks will be addressed:</p> <ul style="list-style-type: none"> - Collect market requirements - Define features list, SW architecture, KPI. - Get familiar with the Inverter control algorithms, the architecture of OLEA® FPCU, the development tools. Particular attention will be paid to the interface and resources to be used by the inverter application and the relevant safety concepts. - Develop, configure, calibrate motor control software using Silicon Mobility model-based development flow and existing software building blocks - Develop vehicle control unit and communication protocol - Develop and test a complete demonstrator using an existing 48V inverter and e-motor
Profile required	Engineer in power electronics or embedded WS or control systems
Expected Skills/knowledge	<p>Embedded software development in C code</p> <p>Control algorithm development in MATLAB Simulink</p> <p>Power electronic system</p> <p>Inverter and motor control application</p> <p>CAN communication</p> <p>Electric Vehicles architecture</p>
Remuneration	€1400/month + Tickets Restaurant + Public transport

