Christian Vincente

(561) 459-6071 • vincente1219@outlook.com • linkedin.com/in/christian-vincente-710013192

Available Summer 2027 (May to mid August)

EXPERIENCE

Electrical Battery Pack Lead & Wiring Lead | Solar Gators Vehicle Design Team 2024 – 2025

- Led design and manufacture of custom Altium PCBs (active-balancing “hat” board + BMS) with over/under-current/voltage/temperature protections; programmed trip conditions in C++; delivered safe, race-ready battery pack that completed 146 laps in the 2025 Formula Sun Grand Prix — Solar Gators’ best first-year performance for a new car.
- Fabricated and installed nearly every wire on Flare (connectors, crimping, soldering, fusing, tesa taping); collaborated with mechanical and solar-array teams to integrate all custom and COTS boards under tight competition deadlines.
- Designed and 3D-printed enclosures/mounts for starter switch, rear-camera screen, and custom dashboard; assisted full vehicle assembly (body, battery pack, solar array).

Mechanical Battery Pack Member | Solar Gators Vehicle Design Team 2023 – 2024

- Designed and 3D-printed snap-fit copper-tab covers, headlight covers, and protective board boxes; rewired entire pack and competed in 2024 American Solar Challenge (1,465.8 miles).

PROJECTS

1977 Batavus Mobat Moped EV Conversion 2023 – Present

- Engineered full EV powertrain: designed 200-cell lithium-ion pack to fit inside original gas tank, deconstructed/re-wrapped 340 used 18650 cells, built custom kWeld spot welder, and fabricated steel + PETG mounts/covers for QS120 motor, controller, and DC-DC converter to preserve classic appearance.

Tesla Model 3 Ownership & Modifications 2018 – Present

- Performed CCS retrofit, backup camera harness repair (trunk-induced intermittent signal), and Unplugged Performance suspension link upgrade with spherical bushings; completed extensive aftermarket modifications including underglow, trim/console wraps, trunk struts, aero covers, mirror dashcam, seat covers, carpet lining, floor mats, puddle lights, and chrome delete.

2000 Toyota Tacoma Restoration 2021 – 2022

- Restored and sold for family: full mechanical refresh (throttle body cleaning to resolve rough idle, timing belt, oil & filter, air filter) plus detailed body and interior work.

Automotive Technician Training & Club | Park Vista Community High School 2017 – 2021

- 4 years hands-on automotive technician coursework and club: diagnostics, repair, maintenance, and performance modifications across multiple vehicles.

3D Printing & Custom Tooling 2023 – Present

- Designed and 3D-printed functional tools, fixtures, and enclosures (webcam holder, soap hanger, potato peeler clip, custom motherboard box) using iterative FreeCAD → OrcaSlicer workflow; extensively tuned Klipper for precision.

Linux Migration & Open Source Toolchain 2025 – Present

- Migrated host OS from Windows to Fedora; recently set up NixOS VM development environment with Neovim and shared folders (reproducibility by design); migrated primary toolchain (SolidWorks → FreeCAD, Altium → KiCad).

CoreXY 3D Printer Conversion (“Duender”) 2025 – Present

- In-progress conversion of two Ender 3 printers: NylonG/PCTG parts printed, printers disassembled; custom enclosures and mounts planned for full rebuild.

EDUCATION

University of Florida, Gainesville, FL — B.S. Electrical Engineering Expected Dec 2027

GPA: 3.29/4.00 • Coursework: Circuits 2, Programming for EE 2, Electronic Circuits, Physics of EE, Digital Logic, Data Science for ECE, Photonics Integrated Circuits, Solid-State Electronic Devices, Electromagnetic Fields, CAD (SolidWorks), Engineering Innovation, Signals and Systems, Computer Communications, Electrical Engineering Design 1, Communication Systems and Components, Formal Methods Robotics & AI

Santa Fe College, Gainesville, FL — A.A. Gator Engineering 2022 – 2023

GPA: 3.41/4.00

TECHNICAL SKILLS

PCB Design & Embedded: Altium, KiCad, C/C++, STM32Cube MX, WaveForms • **CAD & Manufacturing:** SolidWorks, FreeCAD, 3D Printing (OrcaSlicer), Klipper Firmware • **Other:** Python, VHDL/Quartus, MATLAB

Certifications: SolidWorks CAD Design Associate (March 2024) • ASE Electrical/Electronic Systems, Steering & Suspension, Engine Performance (expired)