ATHARVA DESHPANDE

ELECTRICAL ENGINEER

CONTACT

+33 0625668967

deshpandeatharva7@gmail.com

Île-de-France, France

LinkedIn

EDUCATION

2025-2028

- **UNIVERSITÉ D'ARTOIS**
  - PhD student

2022-2024

- **ÉCOLE CENTRALE DE NANTES**
  - MS in Automatic and Control.

2023-2023 (Exchange)

- **POLITEHNICA UNIVERSITY OF BUCHAREST**
  - MS in Electrical Engineering.

2018-2021

- **SAVITRIBAI PHULE PUNE UNIVERSITY**
  - Bachelor's in Electrical Engineering.

TOOLS

- PSIM
- MATLAB/SIMULINK
- Flux
- FluxMotor
- Python
- C/C++
- Microcontrollers(TI C2000, STM)
- SIL/PIL/HIL
- FEMM
- LTspice

LANGUAGES

- English (C2)
- French (A1-A2)
- German (A2)
- Hindi (Native)
- Marathi (Native)

PROFILE

PhD student at IFP Energies nouvelles with a focus on high frequency modelling of motors. Previously, worked on five-phase PMSM modeling and control. Prior experience with multiphysics optimization, PWM analysis, and inverter modeling. Competent in MATLAB/Simulink, and PSIM. Strong interest in motor-inverter system's and high-frequency effects.

WORK EXPERIENCE

- **IFP Energies nouvelles , Rueil-Malmaison, France.** NOV 2025– ongoing

  PhD student in Electrical Engineering
  - "Modelling the HF behaviour of a three phase winding under PWM excitation."
  - Extend the existing HF winding model to a complete machine - PWM inverter, including the power cord.
  - Conduct sensitivity analyses on voltage distribution under PWM excitation.

- **Deep Concept, Tarbes, France.** MAY 2025– OCT 2025

  Power Electronics Engineer
  - Led the power electronics control development, including modeling and implementation of a five-phase PMSM drive system.
  - Developed a control-command strategy for a five-phase inverter.
  - Implemented the control algorithm on a TI LAUNCHXL-F28379D microcontroller.
  - Validated the control performance experimentally on a hardware test bench.
  - Performed integration and verification tests, analyzing system responses.

- **Altair Engineering France** MARCH 2024– AUG 2024

  Simulation Methods Engineering R&D Intern
  - Developed new techniques for the Multiphysics optimization of electrical machines.
  - Improved the control of electric drive system.(Vector control, MTPV, MTPA)

- **Autobot India Pvt Ltd, India** JAN 2022– JUNE 2022

  Model based design Intern
  - Simulated and modelled power electronics converters. (DC-DC, AC-DC, DC-AC)
  - Studied and implemented control techniques for motors (PMSM, IM) such as FOC.

RESEARCH & ACADEMIC PROJECTS

- **Optimisation of position estimation for EV/HEV.**
  - Executed adaptive sliding mode observer with high-frequency injection, improving rotor position estimation accuracy in IPMSMs.
- **Sliding mode control of IPMSM.**
  - Designed first order sliding mode control to control the rotor position of IPMSM.