



engineers go global

THI Scholarship Program for Internships (Praxissemester/Abschlussarbeit)

August-December 2023

at

Pollux / Wetzels (Joinville, Brazil)

Renault (Curitiba, Brazil)

VW Argentina (Buenos Aires, Argentina)

Apply until **February 8,**
2023, for the winter
semester 2023/24!

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What is enGlobe?

englobe – engineers go global is a DAAD funded project at THI which offers 5 scholarships to THI students for internships of 5 months (01.08.-31.12.2023) in English in the following companies:

- located in Brazil: Pollux (Joinville, 1 place), Wetzol (Joinville, 1 place), Renault (Curitiba, 2 places);
- located in Argentina: VW Argentina (Buenos Aires, 1 place).

The offered internships in this catalogue are directly connected to the *enGlobe* scholarship 2023, which is automatically granted to successful applicants (no separate application necessary).

The scholarship includes:

- Single travel allowance (fixed sum, for all travel costs): 1,575€ (Brazil), 1,875€ (Argentina)
- Monthly scholarship rate: 1,175€ (Brazil), 1,075€ (Argentina)

The internship itself does not include any remuneration or further financial support.

Who can apply?

Primarily students of one of the following undergraduate THI study courses:

- Elektro- und Informationstechnik
- Wirtschaftsingenieurwesen
- Fahrzeugtechnik
- Maschinenbau
- Elektrotechnik und Elektromobilität

The internship can be recognized for the **“Praxissemester”** or, in accordance with the company, combined as voluntary internship with the **final thesis**. Sufficient **English language skills (min. B2)** are required for all internships. Undergraduate students from other study courses can also apply as long as they fulfill the requirements and explain their reasons for application in their motivation letter.

1

How to apply?

The following documents have to be submitted **as one pdf file (max. 15 MB)** to enGlobe-internships@thi.de until **February 8, 2023 (23:59 CET)**¹:

- Filled and signed [application form](#), where you can indicate 1-2 internship offer(s) for which you would like to apply
- Motivation letter (1-2 pages) explaining choice of internship offer(s) (preferably in English)
- CV (max. 2 pages) in English
- Current transcript of records in English
- Optional: Proof of sufficient English language skills (min. B2)
- Optional: Proof of Portuguese and/or Spanish language skills²
- Optional: Proof of international experience (studies/internships abroad, participation in international conferences/seminars/courses etc., active membership in international organizations etc.)

Please read our [FAQ](#) (in German) with further important details and hints!

If you have further questions, please contact: enGlobe-internships@thi.de

If you are interested in more information on life and studying in **Brazil**, feel free to contact Luiz Eduardo Prince Goehr, student from Curitiba and Joinville: lup1113@thi.de

¹ By sending your application including your personal data, you confirm that THI is allowed to use it for organizational purposes during the selection procedure.

² Please note: The participation in Portuguese/Spanish classes during summer term 2023 is highly recommended for selected interns who have no basic language skills! See more details in the FAQ.



I.+II. Offers at Renault in Curitiba (Brazil) Production Engineering – Tooling and Support Department

in cooperation with the Federal University of Paraná (UFPR)

Renault do Brasil S.A. is a subsidiary of the Groupe Renault that was established in Curitiba/BR in the year 1998, placed in the Complexo Ayrton Senna, comprising four plants: CVP, CVU, CMO and CIA. Renault currently produces a range of vehicles and vans for the Latin America market, and has the ambition to feature in the TOP-3 of the regional market.

To support Renault in the industrial strategy, there is the PE-TS (Production Engineering – Tooling and Support Department) with the responsibility to deploy the concepts of Industry 4.0 oriented to the maintenance activities.

The **Federal University of Paraná** (UFPR) in Curitiba is a long-standing strategic partner of THI in the automotive network AWARE. UFPR supports this internship program by offering to the interns Portuguese classes and administrative support in visa questions. In case the intern would like to write his/her final thesis connected to the internship and has found a supervisor at THI, the partner university can also support in supervising the thesis on site.

Renault has 2 places but 8 topics which are divided into 2 blocks: **block I: topics 1-4, block II: topics 5-8**. Each block has one supervisor who will be in charge of one place/intern. Please indicate in the application form whether you are interested in block I or II. The details about which topic you will be working on, will be discussed in the interview.

2

Offer Block I: Topics 1-4

1: Industry 4.0 > Create a Control Room Real Time Data Driven for Bottleneck Management
Internship Responsibilities / Deliverables: Renault Software for Process Simulation

2: Industry 4.0 > Digital Twin PaintShop Process
Internship Responsibilities / Deliverables: Digital Twin Simulation Process ASL - Alliance Standard Line

3: Industry 4.0 > Digital Twin BodyShop Process
Internship Responsibilities / Deliverables: Digital Twin Simulation Process Paint Shop Cabin

4: Industry 4.0 > Automatization of Physical Industrial Performance Reports
Internship Responsibilities / Deliverables:

- Development of customized DashBoards using excel of compatible software (e.g., BI for time analysis, bottleneck, time machine, ergonomics, main power, etc...)
- Scenario simulation to anticipate job allocation

Requirements:

Skills of Data Science, Data Base and DashBoards Compilation

Supervision: The supervisor for these 4 projects is Fabiano Silva.

Offer Block II: Topics 5-8

5: Automation of Industrial Physical Performance Data Calculations for the Pre-project Phase in the Bodywork Department

Internship Responsibilities / Deliverables:

Customized excel document or compatible software to automate updates of project milestones (example: time analysis, bottlenecks, machine time. Cycle Time, Ergonomics, staffing model, investments, reception, disbursement of payments...) enabling to analyze it with different scenarios (depending on the volume of information to be treated with the associated dashboard for extracting the indicators).

Requirements:

Engineering background (industrial, control and automation, electrical, mechanical, manufacturing, computing) with knowledge in data science and application development from database information and compilations.

6: Implementation of a Lean Manufacturing Project in the Process of Welding Fasteners (PRP) in the Bodywork Department

Internship Responsibilities / Deliverables:

Development of a computer tool for optimized inventory control, distribution of labor, exchange of batch production by filming, unification of bases (eliminate setup) and process automation.

Requirements:

Industrial Engineering, Logistics, Production or Mechanical Engineering. Desirable knowledge in Lean Manufacturing, good communication and ability to analyze/synthesize.

7: Integration of Robot Monitoring Systems for Preventative Weld Control

Internship Responsibilities / Deliverables:

Development of a system to perform cross analysis between the data collection system of the robot manufacturer Fanuc x Renault SIMAP systems (quality control) x SIMON (Preventive Maintenance) to prioritize corrective actions.

Requirements:

Control and automation engineering, knowledge in data science and application development.

8: Development of a Management System for Solder Point Counters

Internship Responsibilities / Deliverables:

Development of an easy-to-use software tool (excel, power apps, etc.) with an alert/alarm dashboard to control the manual and robotic process welding points (after installing the counters) associated with manufacturing engineering documentation.

Requirements:

Control and automation engineering, knowledge in data science and application development knowledge in VBA programming, logic and data processing.

Supervision: The supervisor for these 4 projects is Renato Costa.

Pollux

Automation

III. Offer at Pollux in Joinville (Brazil) Automation Department

in cooperation with the Federal University of Santa Catarina (UFSC)

Pollux is the most innovative industrial technology company in Brazil. Our purpose is simple: to increase industry competitiveness. We deliver solutions that make factories more productive, efficient and smart, allowing customers to win in an increasingly competitive global scenario.

Automation Department: We deliver assembly lines, robotic cells and machine building solutions that are more efficient and provide an extremely high degree of automation, based on advanced manufacturing precepts and Industry 4.0.

The **Federal University of Santa Catarina (UFSC)** in Joinville is a long-standing strategic partner of THI in the automotive network AWARE. UFSC supports this internship program by offering to the interns administrative support, especially in visa questions. In case the intern would like to write his/her final thesis connected to the internship and has found a supervisor at THI, the partner university will also support in supervising the thesis or internship on site. In any case, it is expected from the student to write a technical paper on his/her activities at Pollux in collaboration with the company and UFSC.

Internship Description

4

Pollux Automation seeks a programming engineer to help design and test special mounting lines for the Automobile Industry and Customer goods.

As one of our engineers, you will create dependable, hardworking products befitting our company's name. You will exercise your creativity and determination every day as you develop functional codes, place them through rigorous testing and release them at a real device when they meet or exceed our specifications for product quality and safety.

Internship Responsibilities

- Develop and build codes on robots/PLCs and run tests to measure their level of function.
- Record and debug the developed codes, altering them as necessary to bring them to safety, performance, and efficiency standards.
- Work with other teams during the robot cells debug, reporting the issues and keeping up the resolution of them.
- Work with research and development of tools to improve the performance of the developing team.

Supervisor: Gian Almeida – Software Automation Manager of Pollux



IV.+V. Offers at Wetzel in Joinville (Brazil) Development Engineering Department

in cooperation with the Federal University of Santa Catarina (UFSC)

The company **Wetzel S/A** is a reference in the automotive, agribusiness, electrical hardware and electrical installations segments. Divided into the Electrical Components and Lighting and Automotive Components divisions, the company is present in Mercosur, Europe and the United States.

We offer a diversified portfolio for customers who need innovative and competitive solutions, which is why we always seek to work in partnership with our consumers, developing products that meet the needs of the projects and exceed expectations. In order to guarantee the quality and excellence of production, from the president to the employees, everyone has the objective of seeking continuous improvements in each phase of the process.

Wetzel is a dynamic organization, in continuous transformation and expansion, which increasingly consolidates its presence in the Brazilian market and abroad.

The Federal University of Santa Catarina (UFSC) in Joinville is a long-standing strategic partner of THI in the automotive network AWARE. UFSC supports this internship program by offering to the intern administrative support, especially in visa questions. In case the intern would like to write his/her final thesis connected to the internship and has found a supervisor at THI, the partner university will also support in supervising the thesis or internship on site. In any case, it is expected from the student to write a technical paper on his/her activities at Wetzel in collaboration with the company and UFSC.

5

Offer IV: Product Engineering

Internship Responsibilities

Wetzel seeks an engineer to work at our Aluminum Division, in the Automotive Components business. As one of our engineers, you will participate in projects to develop new items and products that meet our quality and product safety specifications.

Internship Activities:

1. Support in the execution of new item development projects;
2. Participate in FMEA meetings to develop new items;
3. Assist in the development of projects and drawings;
4. Assist supplier management in product development / PPAP;
5. Support in the preparation and review of Control Plans, MDS, APQP, PPAP, PI (inspection plan) and CO (coding - RX instruction);
6. Assist in the budgeting process / technical feasibility;
7. Participate in the creation of new product tryouts;
8. Participate in the development of product and process improvements.

Supervisor: Ricardo Pimentel - Engineering and Quality Manager

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Offer V: Software Development for Embarked Systems

Internship Responsibilities

Wetzel is looking for electronic, mechatronic, or electrical engineers to work in our Electrotechnical Division in the field of Electrical Components and Lighting, who have knowledge in Programming microcontrollers (Arduino, STM 32), Reading and interpreting electrical and electronic schematics. As one of our engineers, you will participate in the development of products with embedded systems, working with the development of electronic boards and software for embedded systems and will exercise your creativity in the creation of new products and ideas for the lighting area, control of machines, engines, and automation.

Internship Activities:

1. Assist in research and development of products with embedded systems;
2. Support in the programming of micro controllers;
3. Act in the development of layout of electronic boards;
4. Develop schematics/electronic circuit;
5. Perform hardware x software interface activities.

Supervisor: Murilo Brunel da Rosa - Product Development Supervisor



Volkswagen Argentina

VI. Offer at VW Argentina in Buenos Aires (Argentina) At the “Material Science Laboratory”/Department of Quality Assurance

in cooperation with the Technical University of Argentina, FRGP (UTN)

Volkswagen Argentina is the biggest car manufacturer in Argentina, located in General Pacheco, Buenos Aires State, producing cars and pick-ups.

The internship will take place in quality assurance, especially in the Complete Vehicle Analysis area.

Technical University of Argentina (UTN) in Buenos Aires is a strategic partner of THI in the automotive network AWARE. UTN supports this internship program offering administrative support in visa questions to the interns.

Internship Description

The main objective of the internship is to develop a theoretical and practical frame or guideline to create a material database for polymers using analytics techniques of gas Chromatography with mass spectrometry GCMS.

Requirements

- Primarily addressing students from the Material, Chemical, Electrical, Mechanical, Industrial and Computer Engineering and Vehicle Development (students from other study areas can also apply)
- Knowledge of material identification through analytic techniques is valued.

Supervisor: Cintia Fagundez
