

Front-end Developer for Scientific Software

THE COMPANY

EmTDLab is a company founded in 2018 with the vision to advance the future of space exploration.

Effective shielding against space radiation remains one of the most challenging concern of space missions, from satellite on-board systems to deep space human flight. Our goal is to participate in the discovery of entirely new materials for space radiation shielding. Our engineering services and product will soon complement the technologies deployed by the largest and most ambitious aerospace companies.

To do so, EmTDLab has developed a novel proprietary method to identify new advanced materials with optimal radiation shielding parameters and mechanical properties. Based on the support of the European Space Agency, EmTDLab aims to actively develop the technology to synthesize and manufacture those materials with optimal properties.

THE POSITION

EmTDLab is growing and actively recruiting a front-end software developer. Your first responsibility will be creating a graphical user interface (GUI) for our proprietary scientific software for computational materials discovery. This GUI will be responsible for both controlling the software and visualising its output.

Your second responsibility will be maintaining our internal database and facilitating connections between it and the scientific software, possibly also including connections to external databases.

The third potential responsibility is to develop APIs to connect and interface with external software such as GEANT 4.

Ideally, the Front-end developer will be experienced in simple back-end development such as AWS EC2, and RDS

Candidates are expected to have at least some work experience in UI/UX design, general front-end development, and database systems. The ideal candidate will be able to handle these topics independently.

We are looking for a creative, self-starting developer motivated to contribute to a highly interdisciplinary, scientific, computational materials discovery engine to develop new materials for space radiation shielding.

As a team member, developing your own internal and external networks remains crucial. The candidate should feel at ease to initiate and cultivate dynamic collaboration with multi-disciplinary team members including, among others, materials scientists, software programmers, mission scientists, spacecraft systems engineer and radiation engineers.

WHAT WE OFFER

EmTDLab is an incorporated company in Luxembourg since 2022. You will be a key member of a new team with opportunities to have a direct influence in shaping the future of the company. Your opinion matters. EmTDLab is a no-nonsense company with a highly systematic approach to research, development and engineering.

EmTDLab promotes a work culture driven by technical excellence, transparency, integrity, respect, and humour. We encourage diversity in backgrounds. Your appetite for creativity, innovation, intellectual curiosity will be satisfied daily. Being convinced that cross-functional collaboration is a key success factor, the human capital development policy is not to assign you in fixed roles but to encourage personal development.

We work according to flexible organisational principles with respect to work location, working hours and contractual agreements (e.g. part-time work and full-time work). We expect that each team member fulfils her/ his objectives as a part of the company's objective with little constraint added to your R&D and engineering work.

We although expect that we all work as professionals and all respect common sense business logic, commonly agreed research practices, quality assurance and quality control. We are an open-door policy company where team communication is considered as critical for success.

We offer a remuneration package in line with the market, including a yearly bonus, 13th months, meal voucher and paid training opportunities.

The main place of work (headquarters) is Belval.

Candidates from any third-country national (a person who is not an EEA national – i.e. from an EU Member State, Iceland, Norway and Liechtenstein – or a Swiss Confederation national) space are encouraged to apply under a residency permit application. Foreign national currently holding a work permit are also highly encouraged to apply.

SCOPE OF RESPONSIBILITIES

- UI/UX design
- GUI development
- Database development and communication
- UI unit testing
- Communication API development
- Work in sprint using Jira
- Documentation in Confluence
- Code repository GitHub

The scope and description of responsibilities will evolve according to the internal process and product development lifecycle.

REQUIREMENTS

Profile

Work experience in front-end development and specifically UI development. Work experience and ability to get things done and make things work is more important than specific university degrees for this position. General passion for coding and writing clean, high-quality code.

Willingness to improve and learn new technologies as needed, ability to learn independently.

Fluent in spoken and written English; knowledge of other languages is considered as an asset.

Interpersonal skills and experience

A desire to learn and innovate;

Ability to communicate, collaborate, and deliver results as a member of multi-disciplinary teams including scientists;

Superior organizational and analytical skills with keen attention to detail and quality;

Experience working in teams of programmers.

Passion for making things work, patience in pushing square objects through circular shaped holes.

Experience / Seniority

3+ years of industry experience with front-end development.

Knowledge and skills

- VueJS, React and Angular
- Demonstrable understanding of UI/UX design principles
- Proven experience in UI test development
- Experience with version control - specifically Git and GitHub / GitLab
- Experience with MySQL databases or similar
- A keen eye for detail and a passion for creating visually appealing and user-friendly interfaces
- Previous industry experience is highly preferred
- Ability to define and solve logical problems for technical applications.
- Knowledge of and ability to select, adapt, and effectively use a variety of programming methods.
- Ability to recognize and recommend needed changes in user and/or operations procedures.
- General programming experience - design patterns, coding standards and best practices
- Strong knowledge of at least one general purpose programming language.

OPTIONAL ADDITIONAL SKILLS AND EXPERIENCE:

- Experience with Docker Container, running in both Windows and Linux systems
- AWS EC2, RDS
- Experience with gRPC communication protocol in the context of microservices
- Jira and Confluence
- Laravel back-end

APPLICATION PROCESS

Please send an up-to-date resume to jointheteam@emtdlab.com coupled with a short introduction letter answering the question “why our key company approach is important in this role”.

The name of at least two references (MSc-PhD supervisors/current employers),

Diploma & copies of educational certificates will be asked during the process.

Additional publications, non-confidential papers and previous technical use cases are welcomed and will be considered in the evaluation process.

A short-list of candidates will be made, who will be contacted for a first interview over videoconferencing.

Three rounds of interview will take place in total either through videoconferencing or face-to-face.

It is the policy of EmTDLab to provide equal employment opportunity without regard to race, colour, religion, age, national origin, sex, gender, sexual orientation, gender identity/expression, disability, health status, genetic information, or any other basis, protected by data privacy, institutional policy or by state or local laws unless such distinction is required by law.