

Internship Offers 2018

CONTENTS

- EURA NOVA 3
- Research 4
 - Apprentice Data Scientist 4
- Engineering 5
 - Infrastructure automation / Configuration management 5
 - Frontend development 6
 - Internal Business Platform 7
- References 8

EURA NOVA

INTRODUCTION

EURA NOVA is a Belgian company founded in September 2008. Our mission is simple: ``Being a technological incubator focusing on the pragmatic use of knowledge''. Our research and engineering activities are linked to technological directions and industrial opportunities.

Please visit our website <http://euranova.eu> for more information on our activities.

OUR INTERNSHIP OFFERS

This document presents internships supervised by our Software Engineering department or by our Research and Development department. Each of these projects represents a concrete opportunity to generate impact for EURA NOVA.

The student will work in close cooperation with the engineering team and will communicate the advance through the in-house EURA NOVA knowledge management tool.

For more information on our R&D activities, please visit our department's website at <http://research.euranova.eu>.

HOW TO APPLY

If you are interested in one of our offers, please contact us at career@euranova.eu.

RESEARCH

APPRENTICE DATA SCIENTIST

Context: Data Scientist is the sexiest job of the 21st century according to the Harvard Business Review magazine. Here, at EURA NOVA, we also think it is the funniest job of that century. But what are we talking about ? We are talking of ingesting diverse data sources, running distributed machine learning algorithms, visualising big graphs and so on. Sounds great, doesn't it ?

Business Opportunity: At EURA NOVA, we leverage data to extract valuable insights for our clients. But there are so many techniques to test and so much knowledge to digest. We hope that by sharing our knowledge with you, you will help us explore datasets much deeper.

Contribution: During the internship, you will be part of the data science team and will work in a stimulating environment. You will participate in data science projects using cutting-edge tools and techniques from the big data and machine learning domains.

ENGINEERING

INFRASTRUCTURE AUTOMATION / CONFIGURATION MANAGEMENT

Context: The important growth of distributed systems and the emergence of the Dev-Ops philosophy has faded the separation between operations (i.e. 'running the server') and development (i.e. 'building the app') in many companies.

This has led to the emergence of new tools to handle infrastructure automation and predictable deployment. Tools span from configuration management / deployment automation (Puppet, Chef, Ansible, Salt, etc) to resource management (Mesos, Yarn), functional package management (Nix) and app container management (Docker, Lmctfy).

EURA NOVA wishes to further explore how these new tools can facilitate deployment and maintenance of both its internal and external projects.

EURA NOVA is deploying its current generation of tools using Ansible to maintain the machines and Docker to build and deploy the services on top of it. All the steps are automated and reproducible and therefore we wish to push further in the construction of our infrastructure.

Objectives: This internship has several objectives:

- participate in the deployment of the current generation of EURA NOVA's internal services on its new production infrastructure, which will give you the opportunity to familiarize yourself with some of the aforementioned technologies (Docker, Ansible, Gitlab CI).
- participate in the deployment of an artifact registry, i.e. a service where developers will be able to deploy releases of jar, npm packages, docker images, etc.
- design and implement the architecture of a fully-automated build and deploy system based on Gitlab CI, Docker and the artifacts registry.

FRONTEND DEVELOPMENT

Context: Both for its internal tools and in the context of its RD projects, EURA NOVA often needs the capacity to quickly build pretty and efficient web applications hand-in-hand with backend developers, data scientists, etc.

To this end, we are looking for a front-end developer to join the team working on this projects.

Proficiency: Though EURA NOVA strives to work with agility, it also wishes to build durable products: its developers try to write clean and beautiful code. If you are proficient with a technology, your experience will be counted on to better our practices. If you are not, you must be willing to strive to do better everyday.

Technologies: You would work with the following technologies:

- git and gitlab for collaboration,
- HTML, CSS and frameworks such as Bootstrap or Material-UI
- javascript with ReactJS as the main brick for building your UIs,
- visualization libraries such as D3.js or vis.js
- technologies to interact with APIs: REST, websockets, Thrift, etc.

Objectives: The objective of the internship is to join the pool of front-end devs and take an active part in our different projects where a web application is needed.

INTERNAL BUSINESS PLATFORM

Context: As a company whose business is to provide knowledge and expertise, EURA NOVA aims at choosing the right people to work on amazing projects. We want to be sure we will make a difference for our clients. One of our challenges is thus to find the right combination of clients, projects and people.

Currently, most of this carefully tailored matching is done manually. Our company is growing, though, and to cope with this growth we are looking to automate parts of the process where a human touch is not necessary.

This new set of tools will be what you will work on during your internship. You will take part in conceiving and building components of these tools, which are aimed at helping the business team focus on the most useful actions to take with regard to our clients, experts and the projects that link them.

Technologies: The backend is built in Clojure and supported by a PostgreSQL database, the front-end is built in Javascript ES6 using React. Deployment is done with Ansible and Docker.

Objectives: Your objective during this internship will be to build a part of the product described above, from its architecture to its installation in a production environment.

Several aspects of this set of tools can be the focus of your internship:

- Backends & UIs to help store, organize and visualise relevant information.
- Recommendation & matching engines around that information.
- Building and/or integrating team workflow & communication tools.

REFERENCES