# A L V S V A G R E B E K K A . C O M

Let's Break Stereotypes
(http://alvsvagrebekka.com/)



(https://www.instagram.com/alvsvagrebekka)

# EXPERIENCES FROM THE CERN OPENLAB SUMMER STUDENT PROGRAMME 2017

📅 May 15, 2018 (Http://Alvsvagrebekka.Com/Experiences-From-The-Cern-Openlab-Summer-Student-Programme-2017/)👤 Rebekkaalv (Http://Alvsvagrebekka.Com/Author/Rebekkaalv/) 💬

**Spread the love**

(https://www.instagram.com/alv

Today I will share some of my experiences from my summer internship at **CERN** (https://home.cern/). This blog post was originally posted on the Databases at CERN blog (https://db-blog.web.cern.ch/blog/rebekka-alvsvaag/2017-09-my-experiences-cern-openlab-summer-student-programme-2017).

**Databases at CERN**
Powering particle physics

Databases at CERN blog

# My experiences from the CERN openlab Summer Student Programme 2017

Rebekka Alvsvaag on 24 Sep 2017

Hello everyone,

Now I am back in Norway, and it is time for looking back and reminisce about my amazing and memorable summer at CERN. So, today I will tell you about my experiences from my Summer Internship.

*(https://www.instagram.com/alvsvagrebekka)* I got the happy message that I was selected for the CERN openlab (http://information-technology.web.cern.ch/about/organisation/cern-openlab) Summer Student Programme 2017 while eating some amazing Korean BBQ on an excursion in South Korea with my Informatics classmates from the Norwegian University of Science and Technology (https://www.ntnu.no/) (NTNU). My classmates and I knew very well that CERN was a highly prestigious research center. I did not expect to be selected, so, I got very surprised and excited when I got the email saying that my application was successful.

*My first encounter with the name CERN was during my childhood when my father was telling stories around the dinner table about his work at CERN.* He was actually a Physics Summer Student at CERN in 1986 and afterward, he worked at CERN on the DELPHI (https://home.cern/about/experiments/delphi) project in relation to his Ph.D. in Physics. My father was always speaking about his summer at CERN with so much joy and excitement. I was inspired by my father's stories about this fascinating place, and ever since then, it was a dream of mine to someday get the opportunity to work at CERN myself.

So, you might understand that I was very excited about the upcoming summer, but I was also quite nervous.

> *The fact that I was going to a foreign country, not knowing a single soul and working alongside (what I consider as) genius researchers for 9 weeks, was honestly a scary thought in the beginning. But of course, this was also what made it extra thrilling and exciting. Lucikly,* **it turned out to be one of the best experiences and summers of my life!**

## My Experiences from the Programme

In the programme, we were *37 CERN openlab* **Summer Students** from **22 different countries**. All of us were living together in an apartment hostel in the town of *St. Genis Pouilly* in *France* right across the border from *Switzerland*. **During the 9 weeks, we became nearly like a family and got inside jokes, funny memories and experiences together.** We shared stories about the interesting people, the miraculously always sunny weather, the swims in the lakes and the outdoor swimming pools, and the cool trips to nearby cities and countryside.

*Every morning we were biking together over to Switzerland on our CERN bikes,* and we were meeting up for lunch and had BBQs, played football and made amazing spicy Indian food in our spare time. We also had some fantastic weekend trips, traveling around in *Switzerland*, *France* and *Italy*. For instance, enjoying the *Jazz Festival* in *Montreux*, and visiting the *Gruyere Cheese – and the Cailler Chocolate Factory*.

During the summer I also got a renewed interest for hiking, thanks to all the *beautiful hikes* in *Interlaken*, the *Jura Mountains* and hikes with views of the *Mont Blanc* in *Chamonix*!

> *This is just a few of the nice memories from the summer, but what I want to highlight from the stay is the* **cool** *and* **unique opportunity** *to get new friends and colleagues from all across the world and learn about their lives and cultures.*

ᴴᵗtps://www.nstagram.com/alvsvagrebekka)



As you may understand from this, the CERN openlab Summer Student Programme is ***so much more than just a normal summer job***. During the summer there were also *arranged BBQs for the summer students* by the IT-department, and we got the opportunity to visit the *CERN experiments and accelerators*.

For instance, we got to visit *ATLAS (https://home.cern/about/experiments/atlas)* and the *Compact Muon Solenoid* (*CMS* (https://home.cern/about/experiments/cms)), which are *detectors* at the **Large Hadron Collider** (*LHC* (https://home.cern/topics/large-hadron-collider)).

We also were very lucky to go to *Zurich* to visit **Open Systems (https://www.open.ch/en/index.php)**, *ETH (https://www.ethz.ch/en.html)* and last but not least, **Google**. *It was a very interesting and exciting experience!*

*(https:/ /www.i nstagr am.co m/alvs vagreb ekka)*

## My CERN openlab Summer Student Project

But now over to the technical part of the programme.

During the programme, I was working in the **IT-DB-IMS group** **(http://information-technology.web.cern.ch/about/organisation/databases)** which is the Information Technologies and Database Department at CERN. *The objective of my project was to* ***refactor an application called the DB Rota Tool**, which is a web application for scheduling the support activities for the CERN IT-DB-IMS group.* It is based on a technology called **Oracle APEX (https://apex.oracle.com/en/)** or *Oracle Application Express*. As the name states, it is a technology that allows you to develop applications quickly. But it has some disadvantages, for example, that it is *highly tightened to the database* and it is *not modular*.

The *main goal of my project* was to *make a new web application* by *improving the user experience* and make it **modular**, **portable** and **open to extensions**. The project is based on a *collaboration* between **CERN openlab** (http://information-technology.web.cern.ch/about/organisation/cern-openlab) and **Oracle (https://www.oracle.com/index.html)**. Therefore, the *project focused on testing, evaluation and providing feedback* about some of the latest Oracle technologies and frameworks, as well as contribute to the Oracle Community.

In my project, I was developing the new web application using **Oracle JET** (http://www.oracle.com/webfolder/technetwork/jet/index.html) and **Oracle ORDS** (http://www.oracle.com/technetwork/developer-tools/rest-data-s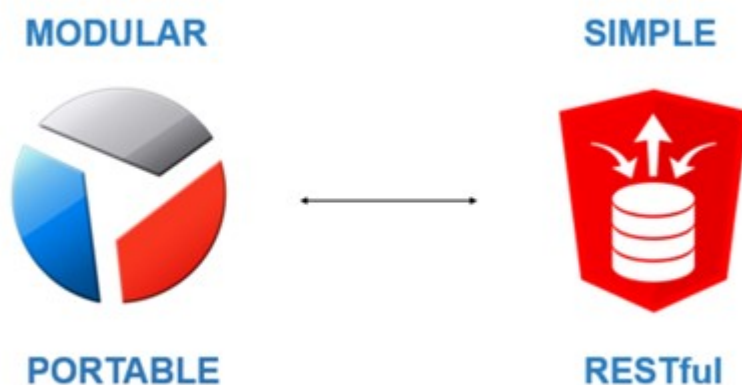ervices/overview/index.html). *Oracle JET* stands for ***Oracle JavaScript Extension Toolkit***, and it is an **open source** *JavaScript framework* which is very *good for developing hybrid applications* (Oracle 2017). The *Oracle ORDS* stands for ***Oracle Rest Data Services*** and it is a java application that maps HTTP verbs to database transactions.

*(https://www.instagram.com/alvsvagrebekka)*



When we *put the two technologies together* we see that they are *quite easily combined* and they have *many advantages* as shown in the figure below (See Figure 2). The *Oracle JET* (http://www.oracle.com/webfolder/technetwork/jet/index.html) is **open source** and it makes your application **modular**, **portable** and **open to extensions** (Oracle 2017). The *Oracle ORDS* (http://www.oracle.com/technetwork/developer-tools/rest-data-services/overview/index.html) is **simple** and it allows you to *expose a* **rest API with nearly zero code** (Oracle 2017).



An *extra challenging* and *interesting* part of the project was that the framework **Oracle JET** is **not the most widely used**. This meant that it was *not very easy to find answers* to issues through for example stack overflow.

> *If you search for **Oracle JET** (http://www.oracle.com/webfolder/technetwork/jet/index.html) in Stack Overflow you get **188 results** and if you search for **Angular** (https://angular.io/) you get **66000**. This is quite a significant difference.*

We figured out that the *best place to find answers* to our questions were in the *Oracle JET Community Forums* and in the *Oracle JET Documentation*. The people in the Oracle JET Community were very helpful and responded quickly.

Another nice place to find tips and tricks for making your first *Oracle JET* application was the **Oracle JET MOOC** (http://www.oracle.com/webfolder/technetwork/jet/globalExamples-Course.html), which stands for **Massive Open Online Course**. It was a good site to start to learn about the framework and its features. Throughout the project, we focused on *providing feedback* and *contribute* to the *Oracle Community*, and it allowed us to test, evaluate and learn about many different Oracle Technologies.

*(https://www.instagram.com/alvsvagrebekka)*

The programme has given me *new and valuable experiences* and *knowledge from full cycle web development* with both analyzing and getting the user requirements, as well as development, testing, security, continuous integration and deployment. I also got to attend i*nteresting and relevant IT lectures* given by experts in their fields, as well as **giving presentations** about my project in a *5 minutes long **CERN openlab Summer Student Lightning Talk***, and a *20 minutes long **presentation for the IT-DB group***. It was a nice and interesting learning experience to hold technical presentations for large groups of people!

If you are interested in more details about my project, you can take a look at my CERN openlab Summer Student Report at https://zenodo.org/record/1034094 (https://zenodo.org/record/1034094)

## TO SUM UP

To end, I want to express my sincere thanks to my *supervisor Luis Rodríguez Fernández* and *the IT-DB-IMS team* for giving me helpful tips and insights on my project, and making me feel very welcome during my two months as a Summer Student at CERN. As well I want to thank CERN openlab and Oracle for giving me the opportunity to join the international environment at CERN, and *work on interesting and challenging topics*. I have gotten valuable experiences and knowledge that I can use in my future studies and career. The programme has also given me many good memories and friends from all around the world.

> ***I am very grateful for the opportunity and I truly recommend it for others!*** *The programme exceeded all my expectations, and it has been an amazing and memorable summer!*

*(https:/
/www.i
nstagr
am.co
m/alvs
vagreb
ekka)*

If you have any *questions or comments* about the project or about my experiences from the programme, feel free to *leave a comment* or *send me an email*. I will be happy to answer!

Cheers,
Rebekka Alvsvåg

### Did you like this article?

Sign up for our Newsletter and be the first to read more exclusive posts:

Subscribe Now! (https://app.monstercampaigns.com/c/gwrvc7oaqzturap4q8e2/)

# References:

1. Rebekka Alvsvåg. Oracle Resftul Data Services & Oracle JET, https://zenodo.org/record/1034094(link is external) (https://zenodo.org/record/1034094)

2. Oracle (2017). "What is JET?". Retrieved 05.09.2017, from http://www.oracle.com/webfolder/technetwork/jet/index.html.                 (link         is        external) (http://www.oracle.com/webfolder/technetwork/jet/index.html.%C2%A0)

3. Oracle (2017). "Oracle JET Online Training Course." Retrieved 05.09.2017, from http://www.oracle.com/webfolder/technetwork/jet/globalExamples-Course.html(link        is        external) (http://www.oracle.com/webfolder/technetwork/jet/globalExamples-Course.html).

4. Oracle (2017). "Oracle ORDS Logo." Retrieved 09.08.2017, from http://www.oracle.com/technetwork/developer-tools/rest-data-services/dat…(link        is        external) (http://www.oracle.com/technetwork/developer-tools/rest-data-services/dataservices-)

2373780.png.

5. Oracle (2017). "Oracle REST Data Services." Retrieved 05.09.2017, from

http://www.oracle.com/technetwork/developer-tools/rest-data-(link                is                external)
(http://www.oracle.com/technetwork/developer-tools/rest-data-)
services/overview/index.html.

6. Oracle (2017). "Oracle JET Logo." Retrieved 09.08.2017, from
https://pbs.twimg.com/profile_images/656652222512521216/kj3zG0jH.png(link                is                external)
(https://pbs.twimg.com/profile_images/656652222512521216/kj3zG0jH.png).

7. Purcell, A. R. (07-07-2017 ). "CERN openlab summer students 2017 group photo."
Retrieved 11.09.2017, from https://cds.cern.ch/record/2274930 (https://cds.cern.ch/record/2274930).

*(https:/
/www.i
nstagr
am.co*
*m/alvs*
*vagreb*
*ekka)*  **Spread the love**

8.    "Photo, Oracle Jet Plane." Retrieved 08.08.2017, from https://www.tmns.com/wp-(link is external)
(https://www.tmns.com/wp-)
content/uploads/2016/03/Oracle-JET-and-Oracle-Mobile-Cloud.jpg

*(https*

---

📁 Technology (Http://Alvsvagrebekka.Com/Category/Technology/)
🏷 CERN (Http://Alvsvagrebekka.Com/Tag/Cern/), CERN Openlab (Http://Alvsvagrebekka.Com/Tag/Cern-Openlab/), CERN Summer Students (Http://Alvsvagrebekka.Com/Tag/Cern-Summer-Students/), Computer Science (Http://Alvsvagrebekka.Com/Tag/Computer-Science/), Informatics (Http://Alvsvagrebekka.Com/Tag/Informatics/), Oracle APEX (Http://Alvsvagrebekka.Com/Tag/Oracle-Apex/), Oracle JET (Http://Alvsvagrebekka.Com/Tag/Oracle-Jet/), Oracle ORDS (Http://Alvsvagrebekka.Com/Tag/Oracle-Ords/), Programming (Http://Alvsvagrebekka.Com/Tag/Programming/), Summer Internship (Http://Alvsvagrebekka.Com/Tag/Summer-Internship/), Technology (Http://Alvsvagrebekka.Com/Tag/Technology/)