

Intern with Oracle Labs OCA team!

The Oracle Contributor Agreement (OCA) team at Oracle Labs has an opening for an internship to automate its integration with GitHub.

Oracle

Oracle, a global provider of enterprise cloud computing, is empowering businesses of all sizes on their journey of digital transformation. Oracle Cloud provides leading-edge capabilities in software as a service, platform as a service, infrastructure as a service, and data as a service.

Oracle's application suites, platforms, and infrastructure leverage both the latest technologies and emerging ones – including artificial intelligence, machine learning, blockchain, and Internet of Things – in ways that create business differentiation and advantage for customers. Continued technological advances are always on the horizon.

Oracle Labs

Oracle Labs is the advanced research and development arm of Oracle. We focus on the development of technologies that keep Oracle at the forefront of the computer industry. Oracle Labs researchers look for novel approaches and methodologies, often taking on projects with high risk or uncertainty, or that are difficult to tackle within a product-development organization. Oracle Labs research is focused on real-world outcomes: our researchers aim to develop technologies that will someday play a significant role in the evolution of technology and society. For example, chip multithreading and the Java programming language grew out of work done in Oracle Labs.

Internship Details

To contribute to an Oracle-sponsored open-source project, contributors need to sign the Oracle Contributor Agreement (OCA) [1]. One OCA is sufficient to cover all changes that they might contribute to any Oracle-sponsored open-source project.

OCA's are submitted using DocuSign electronic signatures (or file upload) and reviewed by Oracle. Once approved, open-source projects maintainers (e.g on GitHub) can accept contributions from the participants (e.g merging their pull requests).

The first goal of this project is to implement a GitHub app [2] that:

- Automatically checks whether an OCA has been signed by the author/committers, provides guidance on how to do that, and labels the PR accordingly.
- Watches for changes made to OCA's in the app (e.g OCA revoked) and acts accordingly (e.g notify maintainers or close PRs).

GitHub actions [3] are also another way of reacting to GitHub events [4] such as when a contributor opens a PR or pushes changes, and they provide features not available in GitHub apps (e.g block merge on PRs). The second goal is to

“Interning at Oracle Labs as part of the Data Studio team was a great experience. I was not only able to apply the knowledge gathered from my studies, but also extend it through challenging tasks in an environment of very supportive and welcoming colleagues.”

Nils Blach
ETH student, 6-month intern

implement a GitHub action that provides similar features to the GitHub app (check OCA status, label PRs, etc..).

Required Skills

The successful candidate is expected to complete the internship using a wide and diverse set of skills.

- Basic understanding of GitHub apps and actions
- Experience with version control systems like GitHub
- Experience with Typescript/NodeJS programming
- Excellent problem-solving and analytical skills

Contact: For more information, please contact Alexandra Fritzen (alexandra.fritzen@oracle.com)

References

[1] <https://oca.opensource.oracle.com/?ojr=faq>

[2] <https://docs.github.com/en/developers/apps/building-github-apps>

[3] <https://docs.github.com/en/actions>

[4] <https://docs.github.com/webhooks/>

Related Topics

Our group at Oracle Labs further offers various internship topics in the following areas:

- Automated Machine Learning with Explainability (AutoMLx)
- BPF Linux Schedulers
- Extending a Distributed Graph Engine (Oracle Labs PGX)
- Extending a Web-Based Enterprise Data Science Platform
- Graph Machine Learning at Oracle
- Graph Support in the Oracle Database
- Machine Learning and Data Analysis Techniques for Domain Global Graphs
- Machine Learning for Optimizing Oracle Database Performance
- Machine Learning Processing in DB Systems
- Oracle Database Multilingual Engine - Modern Programming Languages in the Database

If you are interested in more than one of these areas, it is sufficient to apply once. In our interview process, we are going to take all your areas of interest into account.