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Intern with Graph-in-DB!

Are you looking for an exciting internship opportunity? If so, this might be the perfect fit for you. The Graph-in-DB team at Oracle Labs has an opening for an internship to empower Oracle DB with support for property graphs!

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.

Oracle Labs Graph-in-DB

The Graph-in-DB team at Oracle Labs, which focuses on adding graph support to the Oracle Database, has open internship positions available.

Graphs constitute a powerful tool to efficiently leverage latent information stored inside data connections. As the number of connections grows exponentially in today's increasingly common Big Data, being able to process graphs at scale is more and more relevant.

Oracle Labs Graph-in-DB is a project that aims at adding scalable graph processing support in the Oracle Database. Graph-in-DB is an ambitious project which leverages knowledge from various domains of computer science, such as databases, graphs, algorithms and data structures, tuning and performance, multicore and distributed computing, machine learning, and compilation. It involves a significant research and design effort, as well as challenging engineering tasks. The Graph-in-DB project is also a great opportunity to gain unique software development experience as it takes place in an exceptionally large and complex system.

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Internship Details

Internship topics include, but are not limited to:

- Exploring scalable execution of graph algorithms and queries over graphs that are partitioned across several machines.
- Exploring latest techniques to autonomously exploit available graph indexes in complex analytical queries.
- Exploring hybrid execution (on-disk + in-memory) of graph queries and algorithms.
- Extending a compiler for a graph-centric domain-specific language.
- Exploring possible performance optimizations for graph algorithms and queries, as well as graph loading.

As an intern, you will participate in the design, implementation and evaluation of at least one component of the system, and you will give informal and formal presentations on the progress and results obtained during the course of the internship.

Required Skills

The person stepping into this role is expected to complete the internship using a wide and diverse set of skills:

- Thorough understanding of computer science fundamentals including data structures, algorithms and complexity analysis
- Good problem-solving skills
- Good C programming

Preferred Skills

- Familiarity with version control systems
- Good understanding of SQL
- For compiler-related topics: software language development experience through hands-on coding in a language workbench such as Spoofax, MPS, or xText

Desired Skills

- Notions of database architecture
- Previous experience with development in a large system

Internship Facts

The duration of the internship can vary based on the candidate's constraints. The usual duration is 6 months. We pay a competitive salary. The research topics listed are informative, we are open to suggestions depending on your skills and

Image Caption 1. Our beautiful offices at Prime Tower in Zurich.

"Oracle Labs is a great place to perform meaningful research which can directly impact the industry. Projects are well supervised, and the people are always there to help you in order to end up with a successful project."

Mikael Morales
Former EPFL student,
6-month intern

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qualifications. By sending in your application, you opt-in for processing your personal information.

If this sounds like you, we hope to meet you!

How to Apply

After reviewing the Oracle Labs internship program, please provide us with the following information to apply:

- Your CV or link to your home page containing your curriculum
- Description of your motivation and area(s) of interest
- Availability and preferred internship duration
- Preferred location

If available, please apply to this topic via the internship portal of your university. Alternatively, send an email with the aforementioned information to vlad.haprian@oracle.com

About Us

Innovation starts with inclusion at Oracle. We are committed to creating a workplace where all kinds of people can be themselves and do their best work. It's when everyone's voice is heard and valued, that we are inspired to go beyond what's been done before. That's why we need people with diverse backgrounds, beliefs, and abilities to help us create the future, and are proud to be an affirmative-action equal opportunity employer.

Oracle is an Equal Employment Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, sexual orientation, gender identity, disability and protected veterans status, age, or any other characteristic protected by law. Oracle will consider for employment qualified applicants with arrest and conviction records pursuant to applicable law.

Life at Oracle

An Oracle career can span industries, roles, countries and cultures, giving you the opportunity to tackle new roles and challenges, while blending work and life. Oracle has thrived through 40+ years of change by innovating and operating with integrity while delivering for the top companies in almost every industry. To nurture the talent that makes this happen, we work hard to build a vibrant and inspiring workplace that celebrates diverse, hardworking teams where everyone can contribute. We take care of each other, and value giving back to the community. We have flexible work arrangements and offer benefits including generous paid parental leave and comprehensive premium medical insurance.

We will ensure that individuals with disabilities are provided reasonable accommodation to participate in the job application or interview process, to perform crucial job functions, and to receive other benefits and privileges of employment. Please contact us to request accommodation.

At Oracle, we don't just respect differences—we celebrate them. We believe that innovation starts with inclusion and to create the future we need people with diverse backgrounds, perspectives, and abilities. That's why we're committed to creating a workplace where all kinds of people can do their best work. It's when everyone's voice is heard and valued that we're inspired to go beyond what's been done before.

More information on Oracle's stance on diversity and inclusion

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