

# UBER

Uber's mission is to provide transportation as reliable as running water everywhere, and for everyone. Achieving that mission will require world class engineers and a lot of data.

## **Background**

Big data is at the heart of everything that Uber does, and almost all of Uber's data is geospatially oriented.

Despite the fact that entire industries exist around spatially oriented data, there are very few scalable database systems that enable the spatial querying of data. RDBMS solutions (such as PostgreSQL) do not provide scalability. Other databases with built in geospatial indices (such as MongoDB) do not provide the reliability needed for an "always on" business such as Uber.

## **Project Description**

For this project, students will create a geospatial database solution by creating a standalone service that runs on top of the massively scalable NoSQL database Cassandra.

A finished project is a fully functioning proof-of-concept system that demonstrates the ability to store and retrieve data using geospatial queries, while preserving the scalability that Cassandra provides.

## **Requirements**

We are looking for a team of 3 (possibly up to 4) engineering students. Students should be confident programming in Java and should feel very comfortable working in Linux.

Recommendations to our recruiting department are possible for students that show strong talent and a fierce determination to solve problems.