Master thesis:

The aim of the thesis is the implementation of a utility tool to query and visualize specific GIS data inside a report. The GIS data represent survey data collected during the inspection of galleries in hydro-powerplant infrastructures. The report should contain several statistics about the damages in galleries. The main focus is set on implementing an extended diagram including:

- a geological stratification diagram
- a clearly represented diagram that highlights
  - the damage category
  - the degree of the damage
  - and the localization of the damage

The student will use real world data collected in different inspections.

Required skills:

- Programming knowledge (Java)
- SQL knowledge (PostgreSQL/PostGIS)

Useful skills:

- Statistics (fundamentals)
- JasperReports (an open source reporting tool)
- JfreeChart (an open source framework for creating interactive charts)

A screenshot of the desired output is illustrated in the figure on the next page.

About the Company:
Hydro Safety vGmbH
www.hydro-safety.com

Possible working place: St. Pauls (Eppan an der Weinstrasse)