





# Frédéric Moser

<http://fxi.io>

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## Career objective

Aim to join an innovative, environmentally conscious organization where I can contribute to its success by applying my advanced problem-solving skills and technical expertise to drive sustainable initiatives and solutions.

## Work experience

### Lead Developer 06/2015 – present

University of Geneva Geneva

Developer of **MapX**, an open-source platform for mapping and visualizing scientific data. Key figures:

- ★ Currently supports 37 scientific projects across 73 countries.
- ★ Provides access to 2,400 public datasets.
- ★ Over 4'000 registered users, 3,000 active members and 80,000 distinct guest users from 193 countries in the past year.
- ★ Offers advanced features including real-time data editing, multi-source join capabilities, high-quality map composition, storytelling tools, efficient data flow management, and robust support for vector tiles. Includes OGC standards compatibility and an SDK for custom integrations.

<https://mapx.org>

### Lead Developer 11/2014 – present

University of Geneva Geneva

Lead Developer of **AccessMod 5**, a WHO-supported desktop application for anisotropic accessibility analysis and modeling. Key highlights:

- ★ Collaboratively developed with global health leaders like WHO and UNICEF.
- ★ Recognized as a Digital Public Good, underscoring its significance in public health.
- ★ Extends beyond a modeling tool to include research and educational resources.

<https://www.accessmod.org>

### Research Assistant 03/2014 – 06/2014

University of Geneva Geneva

Worked on the ACQWA project in Valais, Switzerland, focusing on biodiversity.

- ★ Conducted map/reduce operations on multi-terabyte text files.
- ★ Analyzed a stochastic water flow model.
- ★ Developed an interactive web application (**lebamod**) using HPC as backend for configuring, fitting, and analyzing neural network models.

### Research Assistant

08/2013 – 12/2013

University of Geneva

Geneva

Contributed to geomatics introductory courses and developed tools in R.

- ★ Automated statistical predictions of discharge for multiple hydrological stations using scripts (**smodiv**).
- ★ Enhanced a web application (**hexdim**) for spatial exploration of species distribution predictive models.
- ★ Transitioned ArcGIS workshops to open-source GIS solutions.

## Education

### Master of Environmental Sciences 2010 – 2013

University of Geneva

Genève

Thesis : *Impact of climatic changes on alpine biodiversity: species distribution modeling for aquatic insect in Rhone watershed in Valais.*

Direction : D<sup>r</sup> E. Castella & Prof. D<sup>r</sup> A. Lehmann.

### Bachelor of Arts in Geography 2007 – 2010

University of Geneva

Genève

Thesis : *Shared space concept as a solution to reconsider street design on a human scale*

Direction : D<sup>r</sup> B. Levy.

## Computer Skills

Scale: ●●●●● = basic, ●●●●●● = advanced

#### GIS Software

●●●●● Grass GIS  
●●●●● PostGIS  
●●●●● QGIS  
●●●●● ArcGIS

#### Databases

●●●●● PostgreSQL  
●●●●● SQLite

#### Programming Languages

●●●●● JavaScript  
●●●●● R  
●●●●● HTML5  
●●●●● CSS  
●●●●● L<sup>A</sup>T<sub>E</sub>X  
●●●●● Shell Scripts  
●●●●● C

#### Development Tools and Platforms

●●●●● Shiny (R)  
●●●●● Mapbox GL (JS)  
●●●●● Webpack (JS)  
●●●●● Docker  
●●●●● Caret (R)  
●●●●● GDAL

#### Operating Systems

●●●●● MacOS  
●●●●● Ubuntu Server

#### Other Tools

●●●●● vim  
●●●●● git

## Language Proficiency

- ★ **Français** : Native
- ★ **English** : Intermediate
- ★ **Deutsch** : Basic

## Previous education

<b>Diploma of Watchmaker Rhabilleur</b> <i>School of Watchmaking</i> Received a Fondation Hans-Wilsdorf prize for exceptional craftsmanship and skill.	<b>2000 – 2001</b> <i>Petit-Lancy</i>
<b>Diploma of Watchmaker Praticien</b> <i>Patek Philippe Geneva &amp; School of Watchmaking Plan-les-Ouates</i> Completed intensive training in watchmaking, specializing in precision mechanics and fine adjustments.	<b>1997 – 2000</b>

## Previous work experiences

<b>Computer Technician</b> <i>MacWorks SàRL (20-50%)</i> Performed computer and smartphone repairs, micro-welding, troubleshooting, and data recovery, with a focus on reducing environmental impact through repair and reuse.	<b>09/2009 – 02/2014</b> <i>Geneva</i>
<b>Watchmaker</b> <i>Self-employed, Andersen S.A. (20-100%)</i> Designed, prototyped, and produced horological complications with a focus on precision manufacturing processes. Developed awareness of the negative impact of the luxury industry on the world.	<b>11/2001 – 09/2010</b> <i>Geneva</i>
<b>Bicycle Messenger</b> <i>Krick Cyclomessagerie; dvdmania; Factotum (10-20%)</i> Handled express deliveries in urban areas, developing a strong commitment to social and environmental causes.	<b>12/2001 – 06/2008</b> <i>Geneva</i>

<b>Civilian Service</b> <i>Genève Roule, IAUG, Agricultural Operations Switzerland</i> Chose civilian service as a conscientious objector, foregoing military duty. Engaged in diverse roles spanning technology, leadership, and manual labor, demonstrating adaptability and skill growth. Highlights include:	<b>05/2005 – 12/2008</b>
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- ★ Developed and implemented an efficient HR management application, for a non-profit public-benefit association.
- ★ Led teams across various settings, promoting teamwork and ensuring project completion.
- ★ Supported sustainable agriculture through hands-on involvement in agricultural operations, including maintenance, carpentry, and farming tasks.

## Extracurricular activities

<b>Committee Member, Member</b> <i>Association Roue Libre</i> Actively promoted bicycle usage through cultural, sports, and various activities within the community. Highlights:	<b>04/2005 – 04/2024</b> <i>Geneva</i>
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- ★ Handled communication initiatives to enhance community engagement and increase association visibility.
- ★ Designed and implemented software/hardware systems for interactive static bicycle races, boosting event participation.
- ★ Coordinated over 100 volunteers for the Swiss Bicycle Messenger Championship 2005, leading to a successfully managed major event.
- ★ Maintained and updated the association's website, improving user experience and information accessibility.