Frédéric Moser

http://fxi.io

✎ f@fxi.io ⓞ github.com/fxi ☎ +41(0)77-411-27-04   ⌂ 5, Chemin de la Gravière - CH-1225 Chêne-Bourg

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 insects in the Rhone watershed in Valais.*
Direction : Dr E. Castella & Prof. Dr 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 : Dr B. Levy.

Computer Skills

Scale: •◦◦◦◦ = basic, •••• = advanced

GIS Software

- ••••◦ Grass GIS
- ••••◦ PostGIS
- •••◦◦ QGIS
- •◦◦◦◦ ArcGIS

Databases

- ••••◦ PostgreSQL
- ••◦◦◦ SQLite

Programming Languages

- ••••◦ JavaScript
- ••••◦ R
- ••••◦ HTML5
- •••◦◦ CSS
- •••◦◦ LaTeX
- ••◦◦◦ 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

Diploma of Watchmaker Rhabilleur   2000 – 2001
School of Watchmaking   *Petit-Lancy*
Received a Fondation Hans-Wilsdorf prize for exceptional craftsmanship and skill.

Diploma of Watchmaker Praticien   1997 – 2000
Patek Philippe Geneva & School of Watchmaking Plan-les-Ouates
Completed intensive training in watchmaking, specializing in precision mechanics and fine adjustments.

Previous work experiences

Computer Technician   09/2009 – 02/2014
MacWorks SàRL (20-50%)   *Geneva*
Performed computer and smartphone repairs, micro-welding, troubleshooting, and data recovery, with a focus on reducing environmental impact through repair and reuse.

Watchmaker   11/2001 – 09/2010
Self-employed, Andersen S.A. (20-100%)   *Geneva*
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.

Bicycle Messenger   12/2001 – 06/2008
Krick Cyclomessagerie; dvdmania; Factotum (10-20%) Geneva
Handled express deliveries in urban areas, developing a strong commitment to social and environmental causes.

Civilian Service   05/2005 – 12/2008
Genève Roule, IAUG, *Agricultural Operations   Switzerland*
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:

- ⋆ 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

Committee Member, Member   04/2005 – 04/2024
Association Roue Libre   *Geneva*
Actively promoted bicycle usage through cultural, sports, and various activities within the community. Highlights:

- ⋆ 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.