Frédéric Moser

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Career objective

To work for an innovative, environmentally conscious organizations and contributing to its success by providing my scientific and technical skills.

Work experience

Research assistant   03/2014 – 06/2014
University of Geneva   *Geneva*

Application development and data processing for the biodiversity part of the ACQWA project[1] in Valais, Switzerland. Intensive use of `R`, `Shiny (R)`, `Caret (R)`, `awk`, `SQLite` and `Grass GIS`.

- ★ Text file processing (240 GB), creation and optimization of a relational database;

- ★ Spatial vector and raster processing. Creation of a spatial database with multiple environmental predictors;

- ★ Calculation of 40 hourly and monthly hydrologic indices for 25'000 segments of river, for 60 years;

- ★ Development of an interactive web application[2] to create, fit, analyse and share a potentially large ensemble of predictive models and predictions;

- ★ Creating a robust custom queue system to distribute any number of tasks on a remote calculation server, allowing real time concurrent access to the application and high performance parallel computing.

Research assistant   08/2013–12/2013
University of Geneva   *Geneva*

Scripts and functions development in R, contribution to the introductory course of geomatics.

- ★ Development of a set of functions and scripts[3] to automate statistical predictions of discharge for multiple hydrological stations, from simulated rainfall and glacial mass balance data for the 1951 to 2050 period;

- ★ Adding functions, optimization works for a web application[4] made during my Master thesis to spatially explore a set of species distribution predictive models;

- ★ Convertion of a set of `ArcGIS` workshops to an open source GIS solution.

Education

Master of Environmental Sciences   2010–2013
University of Geneva   *Genève*

Thesis : *Impact of climatic changes on alpine biodiversity: species distribution modelling for aquatic insect in 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 at a human scale*

Direction : Dr B. Levy.

Computer skills

Indicative assessment[5] :

GIS

- ●●●●○ Grass GIS
- ●●●○○ ArcGIS
- ●●●○○ QGIS

Databases

- ●●●●○ SQLite
- ●●●○○ Spatialite
- ●●○○○ PostGIS

Scripting

- ●●●●○ R
- ●●●●○ LaTeX
- ●●●○○ HTML
- ●●○○○ JavaScript
- ●●○○○ Shell scripts
- ●●○○○ CSS
- ●●○○○ Python

Libraries

- ●●●●○ Shiny (R)
- ●●●○○ Caret (R)
- ●●●○○ Leaflet (js)
- ●●●○○ GDAL

OS

- ●●●●○ OS X
- ●●●●○ Ubuntu server
- ●○○○○ Windows

CAD

- ●●●●○ Shark FX
- ●●○○○ Autocad

Others

- ●●●●○ Stella
- ●●●○○ SPSS
- ●●○○○ git

Languages

- ★ **Français** : langue maternelle ;

- ★ **English** : Proficient in technical english ;

- ★ **Deutch** : Basiswissen.

[1] ACQWA (*Assessing Climate Impacts on the Quantity and quality of WAter*). http://www.acqwa.ch/
[2] lebamod (*Laboratoire d'écologie aquatique: modélisation de distribution d'espèces*). http://sdm.unige.ch/
[3] smodiv (*Stat. pred. modeling of discharge in Valais*).
[4] hexdim (*Hexagonal grid distribution map*). http://sdm.unige.ch
[5] Scale: ●○○○○ = basic, ●●●●● = advanced

Previous education

Diploma of watchmaker (rhabilleur)   2000–2001
School of watchmaking   *Petit-Lancy*
Award : Fondation Hans-Wilsdorf prize

Diploma of watchmaker   1997–2000
Patek Philippe & School of watchmaking   *Plan-les-Ouates*

Other work experiences

Computer technician   09/2009–02/2014
MacWorks SàRL (20-50%)   *Geneva*
Computer and smartphone repair; micro soldering; data recovery.

Watchmaker   01/2008–04/2010
Andersen Genève SA (10-80%)   *Geneva*
Watch complications designer.

Bicycle messenger   12/2005–11/2008
dvdmania.ch (10-20%)   *Geneva*
Express delivery.

Watchmaker   11/2001–09/2006
Self-employed (80-100%)   *Geneva*
Design of mechanical parts, unique watches manufacturing and repairing.

Service civil   06/2006–07/2006
Genève Roule   *Geneva*
Database development on FileMaker 9.0 : payroll management for external employees; Customer reception and staff management.

Service civil   05/2005–08/2005
Institut d'architecture et d'urbanisme de l'Université de Genève   *Carouge*
Archiving historic plans and slides in an image bank; Development of an interactive tutorial to assist digitizing process.

Bicycle messenger   01/2002–12/2003
Krick Cyclomessagerie (40%)   *Geneva*
Express delivery.

Extracurricular activities

Secretary   04/2005–06/2012
Association Roue Libre   *Geneva*
Committee member from 2005 to 2012. Secretary from 2006 to 2009.
Various activities within an association of bicycle couriers and urban cyclists: staff manager of the swiss bicycle messenger championship 2005 (staff = 100+); software/hardware development for bike races timing; administration of www.rouelibre.org; in charge of various communications projects.