Hakim **Tafer**

Bioinformatician, Data Analyst

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Skills

Programming	Python, Perl, R, Matlab, C/C++, LaTeX, BASH
Metagenomics	Analysis of 16S (Ion Torrent), Shotgun (Illumina), Long read (Nanopore)
Bioinformatics	Transcriptomics, Genomics, Preoteomics, Comparative Genomics, NGS, SNP calling, RNA bioformatics
Machine Learning framework	Weka, RWeka, Tensorflow
Data management	Django web framework, SQL, Genome Browser (UCSC), git
FCE	GCP-Certified, Good Verbal, written and electronic communication
Languages	French, German, Italian, Spanish, English, Arabic

Experience

Extremophile Center, BOKU, Prof. Katja Sterflinger — *Vienna, Austria*

Bioinformatician — *2014 - PRESENT*

- Implementation of analysis pipelines in Genomics (Assembly, Annotation), Transcriptomics (Assembly, Differential Expression), Proteomics and SNP calling for the study of extremophile fungi. (Python, Perl, MySQL,R, BASH)
- Data management and visualisation of -omics data for the extremophile center. (Python(Django), MySQL)
- Deployment of Pipelines on large computer cluster (SLURM)
- Metagenomics of fungi and bacteria from work of arts (painting, sculpture,parchment)

Metacure GmbH — *Vienna, Austria*

Analyst — *2015 - PRESENT*

- Statistical analysis of patients data for Metacure, a biomedical company developing pacemaker-like device to treat diabetes. (Matlab, R)

MFPL, Prof. Renee Schroeder — *Vienna, Austria*

Researcher — *2012 - 2014*

- Analysis of NGS experiments for the SPF **RNA regulation of the Transcriptome** (R,Python,Perl,BASH)
- Prediction of RNA-RNA interactions in bacteria
- Development of tools to compare hidden markov models to detect remote homologies between RNA classes (C,Perl)

University of Leipzig, Prof. Peter Stadler — *Leipzig, Germany*

Researcher — *2009 - 2012*

- Next generation sequencing analysis(Perl,Python,C,R)
- Non-coding RNA functional annotation with machine learning (SVM) (Perl,Python,C,R)
- Selection of the best ML approach and the corresponding hyperparameters (Perl,Python,C,R)
- Development of a tool to score the effects of single nucleotide polymorphisms on protein and ncRNAs (C,R)
- Cooperation with Prof. Dr. Kreil to develop a new approach for microarray design (C,R)

University of Copenhagen/Lundbeck, Prof. Jan Gorodkin — *Copenhagen, Denmark*

Researcher — *Oct. 2008 - Mar. 2009*

- Development of new approaches to design optimized small interferring RNAs with Machine Learning (Python,R)

University of Vienna/Siemens, Prof. Ivo Hofacker — *Vienna, Austria*

Researcher — *2005 - 2009*

- Study of RNA-RNA interactions (C,R)
- Development of fast algorithms to predict interactions between two RNA strands (C,R)
- Development of a new method to efficiently design siRNAs (C,R)
- Prediction of (small) RNAs-mRNA interactions in bacteria and their post-transcriptional effects. (C,R)

Geneva — *Geneva, Switzerland*

Teacher — *2002*

- Teacher for Mathematics in Geneva at the Middle-School Level

ETHZ, Prof. Wuethrich   *Zurich, Switzerland*

Research Assistent   *Sep. 2001- May 2002*

- Study of protein structures with NMR spectroscopy.
- Development of tools to facilitate protein structural annotation

Education

ETHZ   *Zurich, Switzerland*

Diploma in Physics   *Sep. 1995 - Sep. 2001*

- Specialisation in Biophysics (Prof. Dr. Wütrich) and Computational Physics (Prof. Troyer)

University of Vienna   *Vienna, Austria, Leipzig, Germany,*
                                                       Copenhagen, Denmark

PhD Physics/Bioinformatics   *Mar. 2005 - Nov. 2011*

- PhD done in Vienna (Prof. Hofacker), Leipzig (Prof. Stadler) and Copenhagen (Prof. Gorodkin)

Extracurricular Activity

Paperpile LLC   *Vienna, Austria*

Volunteer   *2014*

- Gained expertise in web technologies (javascript, css, html)

Kulturen bitten zu Tisch   *Vienna, Austria*

Member/Treasurer   *2012 - PRESENT*

- Gained expertise in organising large event
- Communication and interpersonal skills

Soeur Emmanuelle Charity Organization   *Cairo, Egypt*

Volunteer   *2003*

- French and Mathematics Teacher in the Moqattam district
- Gained broad arabic language knowledges

International Language Institute   *Cairo, Egypt*

Arabic Student   *2003*

- Learned colloquial and modern standard arabic