


Jonathan Sulc | Bioinformatician

Chemin des Prés 15 – 1580 Oleyres – Switzerland • Born 27.08.1988
☎ 078 924 94 21 • ✉ jonsulc@gmail.com •  jonathansulc • Single

Profile

Well-versed in both biology and computer science, I am equally skilled in the lab and at the computer. Meticulous and possessing strong analytical skills, I am looking for a position with interesting challenges in biology and/or bioinformatics.

Education

MSc in Molecular Life Sciences: bioinformatics, 5.5/6 University of Lausanne

- Thesis: Creation of a functional model of the human beta cell, supervisor: Ioannis Xenarios 2013–2015
 - Built a qualitative model from literature and refined it through simulations
- Participated in the sequencing, assembly, and annotation of a bacterial genome
 - Prepared samples for Illumina sequencing
 - Performed multiple assemblies and selected the one with the highest quality
 - Used available tools and literature to identify and classify genomic islands
- Developed a method for the detection of transcription start sites (TSS) from RNA-seq data
 - Predicted the TSS of 2000 genes in *Pseudomonas aeruginosa*
 - Achieved sufficient precision for *de novo* motif detection in upstream sequences, yielding 10 transcription factor binding motifs occurring in nearly 1000 sequences
- Predicted the structure and function of an uncharacterized human protein using bioinformatics

BSc in Biology, 4.9/6 University of Lausanne

- Created a website showing the effect of a mutation in luciferase, including 3D animations 2010–2013
- Investigated the division of labor in *Camponotus fellah* ants
 - Designed an experiment to test the effectiveness of each caste in the defense of the colony
 - Statistically demonstrated the superior effectiveness of the major caste in eliminating enemies
- Investigated the efficiency of various promoters on the expression of erythropoietin in CHO cells

Bachelor in computer science (Interrupted) EPFL

- Worked as an equal member of a 4-person team to construct a robot which won first place in the 2007 Robopoly (EPFL) robotics contest 2006–2009

Experience

Internship in the labs of K. Lapouge and C. Fankhauser University of Lausanne

- Developed basic tools for ChIP-seq data analysis in python Jul–Aug 2013
- Analyzed the movement of plant leaves using a program in MATLAB
- Began the development of a graphical user interface for this program

Sergeant in communications division, Swiss army Zürich

- Trained new recruits in the use of specialized computer and communications equipment 2009–2010
- Led squads of 4–8 soldiers during exercises

Languages

English (C2), French (C2), German (B2), Czech (A2)

Technical skills

Programming: python, java, C++

Bioinformatics: R (data analysis), MATLAB, Blast, MEME, online databases, ...

Interests

Electronics and programming (Raspberry Pi/Arduino), bonsai, vivariums

References

Available on request