

Presentation at Institut Pasteur Proteomic BioInformatic Position

Gabriel Chandesris



September 3rd, 2020

Table Of Content

- 1 Curriculum Part
- 2 Position Part
- 3 Questions ?!

Curriculum Part

1 Curriculum Part

- Starting points
- Continuation (working and studying on same time)
- Data treatment, Bioinformatics, Software Dev, Trainer...

Starting points

What I Wanted to do

- Major interest for Computers and related Tools ;
- Interest for Science and Biology ;
- Experimentations in both domains ;
- Curiosity ! (and some ideas)

Diplomas (“French Intitulés”)

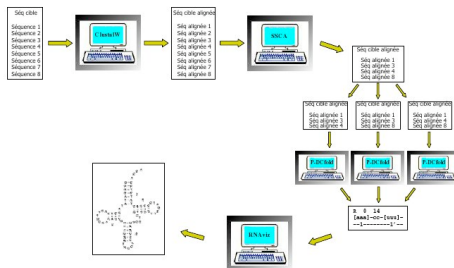
- **2000** Baccalauréat Scientifique Spécialité Sciences de la Vie et de la Terre ;
- **2003** BTS Biochimiste ;
Training: “*Diagnostic de l’hémochromatose génétique par biologie moléculaire – Validation d’une technique automatisée*”

Continuation (working and studying on same time)

- Working as Lab Technicien / Engineer (medical analysis) ;
- Night class in *Conservatoire National des Arts et Métiers* ;
- Certification (2005) then Licence (2007) in Bioinformatics (training at Sanofi R&D SCDM : a data integration module)
- **2009** Master of Bioinformatics at Evry (near Genopole)
 - Train on Year 1 : IBISC CNRS Lab at Evry ("Industrialisation d'un logiciel pour la prédiction de structures secondaires d'ARN non codants")
 - Train on Year 2 : Dassault Systèmes ("Fédération de bases de données en sciences de la vie – Conception et mise en place d'un prototype dans ENOVIA V6")

Train on Master Year 1 : IBISC CNRS Lab at Evry

"Industrialisation d'un logiciel pour la prédiction de structures secondaires d'ARN non codants"

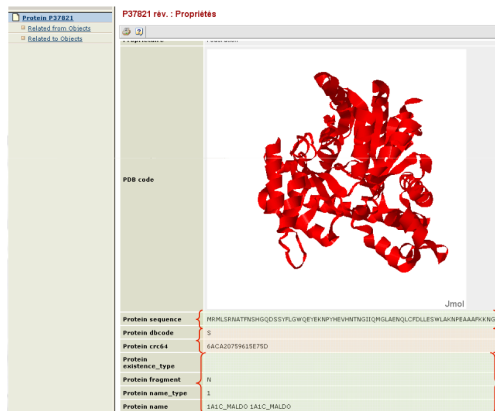


- Analyze of Biology Context (Studies of RNA, analyse and predict structures) ;
- Approach is use of different algorithms (ClustalW, SSCA, PDCFold)
- Analyze of Existing Software (a JAVA Stand-Alone Application), Documentation & Reverse Engineering ;
- Adaptation to Web (in an Apache Tomcat Server) ;

Train on Year 2 : Dassault Systèmes

"Fédération de bases de données en sciences de la vie -
Conception et mise en place d'un prototype dans ENOVIA V6"

- DataBases : InterPro, UniprotKB, PDB ;
- Documentation and bibliography,
- Review, comparisons (mediation, data warehouse) and limitations,
- Data Mapping ;
- Prototyping ;
- ...



Data treatment, BioInformatics, Software Dev, Trainer...

- EDD (2009-2010) : working on building a complete framework (in Perl) of Data Treatment (from tabular files and XML to a Postgre Relational DataBase, SQL) ;
- SoBioS then Dassault Systèmes (BIOVIA brand) ; European BioIntelligence project, 2010 to 2018 :
 - Prototyping, modeling, documentations, presentations...
 - Regular meeting with Pharma (Ipsen, Servier, Sanofi)
- Consultant at OXiane (2018-2020) and working with JAVA tools and frameworks :
 - Maintaining and Developing Software for client ;
 - Starting internal train for Apache Kafka framework (performant Messaging and Log Service).

Position Part

2 Position Part

- What I come with : Experiences in previous positions !
- What I come with ! Working methods ?!
- What I come with ! Technologies and other elements !

What I come with : Experiences in previous positions !

- I worked in Private Companies (mostly) and some Public ;
- Knowledge of working habits and working methods in these domains (precisions on next slide) ;
- Biology, Biochemistry, Immunology... (technical positions)
- Computer Engineering, especially software development (scripting, OOP, Delivery and Integration, Design Patterns) ;
- BioInformatics : databases and data integration, data treatment (algorithms)...
- *Computer and software development as TOOLS for Biology and BioInformatics !*

What I come with ! Working methods ?!

- V-Cycle : force the formalism and documentation and tests, mid- and long-term projects ;
- Agile / Scrum and eXtreme Programming (XP) : iteration and 'continuous' delivery ;
- Tests, Prototyping and Industrialisation
- Documentation : 'Office' and similar, \LaTeX , Markdown, Wiki, Source Code (DOxygen / JavaDoc)...
- xUnit, Mockito, MockNeat : Unit Tests, Integration, Data ;

What I come with ! Technologies and other elements !

- Programming languages and their libraries / frameworks : Java, Perl, Shell (Bash), some knowledge of Python and C/C++
- Data manipulation, Extraction and Treatment, in different file formats and databases : tabular, CSV, XML... And some from BioInformatics Tools (FASTA, ClustalW...) !
- “*Software CraftmanShip*”
- Some tools : SourceCode / Project versionning (SVN and GIT), IDEs (Eclipse and similar), OS (preference for Unix / Linux but MacOS X and Windows exists !)...
- Trainer / Mentor : always seeking for examples to make a better learning and transmission of knowledge.

Questions ?!

3 Questions ?!

Questions !?

- BioSilico : <http://github.com/gabywald/BioSilico> ;
- Present on LinkedIn and Twitter (easy to find) ;
- ...

Questions !?

Questions !?