MAYA LOUAGE

in www.linkedin.com/in/maya-louage   @ louage.maya@gmail.com   5th Feb 2000   +32 471 45 8552   Zürich, Switzerland

EDUCATION

MSc in Computational Biology and Bioinformatics, 5.65/6 average
Applied modelling, statistics and immunology courses

Sep. '21 – Mar. '24   ETH, UZH Zürich and Uni Basel, Switzerland

- Excerpt of courses: a range of computational systems biology courses, evolutionary dynamics, design of experiments, computational statistics, introduction to high performance computing and principles of machine learning
- Biological focus on immunology

BSc in Nanobiology, *cum laude* 8.8/10 average
Cellular and molecular biology courses with a strong engineering and biophysics context

Sep. '17 – Jun. '20   TU Delft and EMC Rotterdam, Netherlands

Exchange, 8.9/10 average with Holland Scholarship
Courses in complex networks (R), protein technologies, photonics and nuclear physics and nutrition

Jul. '19 – Dec. '19   RMIT Melbourne, Australia

EXPERIENCE

Thesis on spinal cord injury (SCI) recovery
Temporal patterns in SCI recovery, grade 6/6

Sep. '23 – Mar. '24   Biomedical Data Science lab ETH Zürich, Switzerland

- Mathematically understanding the various injury severity scores used in spinal cord injury to correctly evaluate the hypotheses
- Explored different strategies than currently used in literature for inference in SCI by using decision trees, mixed models with ordered logistic or censored linear regression, smoothing splines as well as bootstrapping and permutation tests to test the hypotheses (R, Unix)

Internship in pharmacokinetic modelling
Modelling recycling antibodies and bispecific antibodies using mixed ODE models

Feb. '23 – Jul. '23   LYO-X Basel, Switzerland

- Implementing a target mediated drug disposition (TMDD) model with antibody recycling to understand where in the parameter space antibody recycling could be beneficial (R, Monolix)
- Validation of models on in vitro or preclinical species and clinical data
- Review and implementation of scaling methods for TMDD models from pre- to clinical species
- Prepared various client presentations showing model justification and predictions
- Generating reproducible code and a reusable library of bispecific antibody models

Internship on in vitro stem cell growth
Culturing stem cells and predicting their growth

Oct. '20 – Apr. '21   Antleron Leuven, Belgium

- Development and validation of polynomial metabolic growth models for hTERT-MSC cells using lactate and glucose measurements to investigate whether this information suffices to estimate cell count as an alternative to destructive sample measurements (Python)
- Culturing and medium refreshment in flow chamber of hTERT-MSC cells in T flasks

Thesis on E. coli metabolism modelling
Effect of ppGpp levels on E. coli growth and resource allocation, grade 8.5/10

Jan. '20 – Jun. '20   Bokinsky lab TU Delft, Netherlands

- Constructing and validating coarse-grained biochemical models including carbon and nitrogen nutrient sources, parts of the Krebs cycle and amino acid synthesis with a focus on resource allocation regulation by ppGpp and cAMP (Python)
- Transforming and culturing E. coli as well as LC-MS sample preparation

TECHNICAL SKILLS

- **Programming languages**: Python, R, MATLAB, Bash
- **Software tools**: LATEX, Git, Unix, Microsoft Office, Monolix, COPASI
- **Academic skills**: reflecting on present tasks in the light of past ones, quick reasoning, critical thinking, open-minded
- **Languages**: Dutch (native), Spanish (native), English (academic), French (conversational), German (conversational)

EXTRACURRICULAR ACTIVITIES

Study association
Student link with department (Unterrichtskomission)
📅 Mar. '22 – Sep. '23   📍 ETH Zürich, Switzerland

- Develop, conduct, and analyse student surveys; communicated the results and potential mitigation strategies to the department
- Structuring team meetings
- Communicating proceedings with students on Wiki and in group chats

Mentor for first year students
Guidance and introduction of new students to the campus
📅 Sep. '18 – Jun. '19   📍 TU Delft, Netherlands

- Introduce students to the campus, online resources, how to study for courses

Climbing gym
Route setting and cleaning the gym
📅 Sep. '17 – Jun. '19   📍 Delft, Netherlands

Voluntary work
Arts and crafts for patients at the institute of neuroscience
📅 Jul. '15 – Feb. '16   📍 Guayaquil, Ecuador