Mr Cyrille NGUIPDOP LOWE

Advanced Engineer in Life Science | Biostatistician

PROFILE

3 Key positions/projects

02/2022 to 09/2022	Catholic University of Louvain / Master's Thesis / Combination of univariate and multivariate analyses in the analysis of omics data from an experimental plan – transcriptomic, Genomic, negative binomial model (Law, estimations of parameters, modelling), Develop Package LMWiRe – (R software)
10/2021 to 01/2022	Catholic University of Louvain / Project (Academic) / Evaluate the impact of a treatment on the depressive state of patients – Mixed Model – (SAS software)
06/2021 to 10/2021	"Support en Méthodologie et Calcul Statistique" (SMCS) / Biostatistician (Internship) / Perform statistical analysis of metabolomic data (MS, NMR) for the detection of biomarkers of interest according to the experimental plan – Communication and sharing results and conclusions with the researchers – (R & JMP software)

Key competences

Analysis techniques:	Cluster, Regression, Monte Carlo, GLM, GLMM, Bayesian inference, ACP, MDS, PLS-DA, ASCA^{+},…
Tools:	MS Office, LaTeX
Methodologies/Norms/standards:	ICH – GCP E6 R2, GMP
Programming Languages:	SAS, R, Rmd, Shiny, Python, SQL, JMP, JAMOVI, PASS, SPSS

Languages

French	Native
English	Intermediate (B2)
Dutch	Basic (A1)

EDUCATION - TRAININGS & CERTIFICATES

Education

2020 – 2022, Master: Statistics with biostatistics orientation
Catholic University of Louvain, Belgium

2019 - 2020, Master 1: Data Analysis in Biological Engineering
Catholic University of Louvain, Belgium

2011 - 2017, Bioengineer: Agronomic Sciences
University of Dschang, Cameroon

Trainings & Certificates

▶	***2023***	*Unlimited*	*Python A-Z™: Python For Data Science With Real Exercises!*	*Udemy*
▶	***2023***	*Unlimited*	*JMP Training for Statistics & Data Visualisation*	*Udemy*
▶	***2022***	*Unlimited*	*R Programming A-Z™: R For Data Science With Real Exercises!*	*Udemy*
▶	***2022***	*Unlimited*	*R Programming: Advanced Analytics In R For Data Science*	*Udemy*
▶	***2021***	***U**nlimited*	*SAS Certified Specialist: Base Programming Using SAS 9.4*	*SAS*
▶	***2022***	*Unlimited*	*SAS Programming Base Certification Course for SAS Beginners*	*Udemy*
▶	***2022***	*Unlimited*	*SAS Programming Advance Certification Course (SAS SQL, Macro)*	*Udemy*
▶	***2022***	*Unlimited*	*Good Communication*	*e-AKKADEMY*
▶	***2022***	*Unlimited*	*Stakeholder Management*	*e-AKKADEMY*
▶	***2022***	*Unlimited*	*Time Management*	*e-AKKADEMY*
▶	***2022***	*Unlimited*	*ICH – GCP E6*	*e-AKKADEMY*
▶	***2022***	*Unlimited*	*Working With Pharma*	*e-AKKADEMY*
▶	***2022***	*Unlimited*	*Basic Immunology*	*e-AKKADEMY*
▶	***2022***	*Unlimited*	*Drug Development Process*	*e-AKKADEMY*

PROFESSIONAL EXPERIENCE

Master Thesis | 02/2022 – 09/2022| 8 Months | Louvain-la-Neuve

Catholic University of Louvain (UCL) – Student

Name of Project: Combination of univariate and multivariate analyses in the analysis of omics data from an experimental plan

Project description/ Main tasks

- **Description**: Show that it is possible to apply univariate and multivariate analyses, considering the specificities of the data which can be continuous (metabolomics data) or counting (transcriptomics specially RNA-seq data)
- **Main tasks:**
  - Understand the LMWiRe, MASS and EdgeR packages, and understand the negative binomial model and the estimation of his parameters in RNA-seq ways
  - Implement analysis of RNA-seq data in LMWiRe package
  - Further development of the LMWiRe package

Main results

- Generic R codes (Rmd) – univariate and multivariate analysis for metabolomics and RNA-seq data with two factors in experimental plan
- Master Thesis document – explain all methodologies and different steps on how to use generic codes and the various issues that can be resolved with them.

Tools/Technical environment

- **Software:** R, Rmd
- **Statistical tools:** t-test, ANOVA2, GLM, ACP, ASCA+, ASCA-E, APCA+

Biostatistician *(student's Job)* | 12/2021 – 07/2022 | 8.5 Months | Louvain-la-Neuve

Statistical Methodology and Computing Service (SMCS) – Consultancy

Project description/ Main tasks

- **Data cleaning and data exploration**
  - Online survey results: data preparation / exploration / analysis to meet customer demands
  - Communicate with the project's clients, and share results and conclusions with them

Main results

- Clean dataset file
- Rmarkdown files (.Rmd & Htlm)
- Reportings, communication and sharing results with client

Tools/Technical environment

- **Software:** R, Rmd, JMP, Limesurvey
- **Statistical tools:** T-test, ANOVA I, ANOVA II, GLM

Project | 10/2021 – 01/2022| 4 Months | Louvain-la-Neuve

Catholic University of Louvain (UCL) – Student

Name of Project: Evaluate the impact of a treatment on the depressive state of patients – Mixed Model

Project description/ Main tasks

- **Description**: Study focuses on new cognitive-behavioral psychotherapies used for the treatment of depression.
- **Main tasks:** Compare the effect of 2 treatments on the depressive state of patients (who suffer from clinical depression), using the mixed model
- **Secondary Task:** Study the covariance (AR1, CS, UN) matrix of the model

Main results

We demonstrated that:

- The covariance structure (CS) model was the model best fitting for the data
- Time decreases the value of the depression severity measure
- Being in a treatment group decrease or increase the value of measured depression severity

Tools/Technical environment

- **Software:** SAS
- **Statistical tools:** GLMM

Biostatistician *(internship)* | 06/2021 – 10/2021| 4 Months | Louvain-la-Neuve

Statistical Methodology and Computing Service (SMCS) – Consultancy

Name of Project: Metnapar

Project description/ Main tasks

- **Description**: Apply the metabolomics of Mass Spectrometry (MS) and Nuclear Magnetic Resonance (NMR) for identify the mode of action of promising natural antiparasitic derivatives, in certain pathogens (Trypanosoma brucei Plasmodium falciparum, …).
- **Main tasks:**
  - Platform analysis and produce a R code to obtain the same result
  - Identify the metabolites of interest given the experimental plan
  - Reporting, communication, and results sharing with researchers.
- **Secondary Task:** Training of researchers on the use of R and JMP software (basics)

Main results

- Generic R codes – univariate and multivariate analysis for metabolomics and metabolomics data with two factors in experimental plan
- Technical Notes – explanation on how to use the generic codes and the various issues that can be resolved with them.

Tools/Technical environment

- **Software:** R, Rmd,shiny, JMP (Basis), MetaboAnalyst
- **Statistical tools:** t-test, ANOVA I, ANOVA II, ACP, ASCA^{+}, ASCA-E, APCA^{+}

Additional Information

Driving License	*Yes*
Extraprofessional activity/ Hobby	*Swimming, football, travelling*