

Lucas V.H.H-TRAN, PhD

Biomarkers Data Scientist with 10 years of experience and a Bachelor's degree in Pharmacy, driving impactful insights in healthcare and pharmaceutical research.

Age: 35 * *Nationality:* French * *Swiss work permit:* B

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Work Experience

Christine Kühne – Center for Allergy Research and Education

Nov 2022 – Present

Biostatistician (Observational Study & Preclinical)

Davos, Switzerland

- Managed and analyzed data for over 3,000 atopic dermatitis patients in the PRORAD study, ensuring adherence to ICH/GCP standards.
- Collaborated with biologists, clinicians, and engineers to deliver actionable insights, enabling more informed research directions and decisions.
- Served as Statistical Project Manager for [Davos Biosciences](#), a non-profit Biotech SME and spin-off of CK-CARE; supervised students.

AXIA

Apr – Oct 2022

Preclinical Oncology Biomarker Biostatistician (Consultant at SANOFI)

Paris, France

- Applied statistical and machine learning methods for target identification, biomarker prediction, and pathology analysis in drug discovery.
- Reviewed statistical analysis plans and developed corresponding statistical programs for implementation.
- Developed tools to analyze multi-omics data from oncology clinical trials.
- Prepared Spotfire dashboards for reporting and visualizing deliverables.

ENDODIAG

Jun 2020 – Mar 2022

Biomarker Data Scientist (Preclinical Phase)

Paris, France

- *ENDODIAG develops novel diagnostic solutions for endometriosis to improve patient management, treatment, and fertility strategies.*
- Performed data management (obtaining, merging, cleaning, and quality control) in accordance with Good Clinical Practice (ICH/GCP).
- Handled missing data using multiple imputation and deep learning techniques.
- Analyzed microRNA, RNA-seq, and proteomics data for biomarker discovery using R/Bioconductor and Python.
- Built machine learning pipelines (feature engineering, selection, and optimization) to identify transcriptomic and proteomic signatures for endometriosis prediction.
- Utilized PyCaret, H2O, scikit-learn, TensorFlow, and PyTorch to model multi-level clinical trial data.
- Created intuitive graphics and visualizations for data analysis and reporting.

Bordeaux School of Public Health

Nov 2018 – Dec 2019

Postdoctoral Biostatistician (Phase 1-2 Clinical Trials)

Bordeaux, France

- *Contributed to the European project DALIA, investigating a dendritic cell vaccine as a safe and effective treatment for HIV patients.*
- Applied knowledge of clinical trial design, regulatory requirements, and causal/Bayesian inference.

- Developed machine learning and statistical tools to analyze longitudinal data from Phase 1-2 HIV vaccination trials.
- Compared clustering approaches (cytometree, flowMeans) for quantifying immune cell subgroups from flow cytometry data.
- Developed R packages and Shiny Apps for data visualization and analysis.

National Research Institute for Agriculture, Food and Environment *Oct 2015 – Oct 2018*
Research Assistant (EU Project Feed-a-gene) *Toulouse, France*

- *Developed novel statistical models based on linear mixed models to handle changes of (genetic) random effects over time.*
- Modeled longitudinal data using time series analysis, forecasting, and linear/non-linear mixed models.
- Estimated variance components for longitudinal data using random regression and structured antedependence (SAD) models with ASReml and BLUPf90.
- Evaluated the potential of genomic information in predicting phenotypes (GWAS, single step).

University Hospital of Lyon *Jan 2015 – Jul 2015*
Research Assistant *Lyon, France*

- Analyzed longitudinal Aspergillus antigen data in immunocompromised patients using imputation for missing data.
- Developed survival and prognostic models to create a predictive score for early detection of Invasive Aspergillosis.

Education

National Polytechnic Institute of Toulouse, France *Oct 2015 – Oct 2018*
Ph.D. in Statistical Methods for Quantitative Genetics
Thesis: New longitudinal genetic models for feed efficiency, theses.hal.science/tel-02789358v1

University Lyon 1, France *Sep 2014 – Aug 2015*
M.Sc. in Biostatistics, Biomathematics, and Bioinformatics
Thesis: Survey of Serum Aspergillus Antigen in Patients [...] Role in Predicting Invasive Aspergillosis, DOI:10.1182/blood.V126.23.3428.3428

Hochiminh University of Medicine and Pharmacy, Vietnam *Sep 2008 – Aug 2014*
Pharm.B.
Thesis: Ex-Vivo Percutaneous Absorption of Enrofloxacin: Comparison of LMOG Organogel vs. Pen-travan® Cream, DOI: 10.1016/j.ijpharm.2015.12.018

Projects

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| Ebook | Large Language Models-FAQ (bookdown.org) |
| Post | Rpubs (https://rpubs.com/hung/) |
| Software develop | BiomartScope, aucmat, atcdtd, RNAseqDataDownloader (github), MLFeatureSelection (shinyapps.io 1), FDA novel approval(shinyapps.io 2) |
| Multi-omics Data Analysis | CK-CARE, SANOFI,JNJ, UCB(Data analysis Report) |
| ML for Biomarker Discovery | ENDODIAG (endodiag.com) |
| Longitudinal Genetic Models | New genetic models for feed efficiency (PhD Thesis) |
| Flow Cytometry Data Analysis | NK Cell Receptor Repertoire Analysis (Frontiers in Immunology) |
| Statistics in Diagnostics | Survey of Serum Aspergillus Antigen (Blood Journal) |
| Kinetic Modeling | Ex-Vivo Percutaneous Absorption of Enrofloxacin (Int. Journal of Pharmaceutics) |

Technical Skills

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| Statistical/ML Languages | R, Python, SAS |
| Other Programming | Julia, L ^A T _E X, Shell, Fortran, Matlab, HTML/CSS/JS |
| Specialized Tools | ASReml, BLUPf90 family, SciLab |
| Cloud Platforms | AWS, Azure, GCP |
| Environment | Windows, Linux, macOS, Git, GitLab CI, Jupyter Notebook |
| Analytics Platforms | Tableau, Spotfire |

Languages

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|----------------|----------------------------------|
| English | Professional Working Proficiency |
| French | Professional Working Proficiency |
| German | Basic Proficiency |