Noumea, New Caledonia

March, 7th 1996

Driving licence

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Research Gate

Skills

Computer Science
- Python, R/RStudio, MATLAB, SQL, PostGreSQL, Linux, QGIS, HTML/CSS, PHP, LaTeX.

Language
- French (fluent)
- English (fluent)
  TOEIC (April 2018) : 820/990 points
- Vietnamese (mother tongue)

References

Pr. Nazha Selmaoui-Folcher
Full Professor in Computer Science
nazha.selmaoui@unc.nc
ISEA, University of New Caledonia

Pr. Philippe Fournier-Viger
Distinguished Professor in Computer Science
philfv@szu.edu.cn
BigData Institute, Shenzhen University, Chine

Pr. Jérémie Bigot
Full Professor in Applied Mathematics
jeremie.bigot@math.u-bordeaux.fr
IMB, University of Bordeaux, France

Rodrigue Govan

PhD Student in Computer Science

Professional Background

Fixed-Term Contract – Data Scientist
Institute of Exact and Applied Sciences, University of New Caledonia
2020 – September to December
- Analysis of natural water quality data in New Caledonia.
- Contribution to research paper writing.
- Environment : Python (sklearn, statsmodels, plotly, Jupyter), QGIS, Access, PostGreSQL.

Internship – Data Scientist
IDAIA Group, Bordeaux, France
2019 – February to August
- Use of Deep Learning for object detection on satellite images.
- Environment : Python (sklearn, Tensorflow, PyTorch, plotly, Jupyter), QGIS, Linux.

Academic Background

Doctorate – Computer Science
Institute of Exact and Applied Sciences, University of New Caledonia
Since October 2021
- Title : « Evolving and Dynamic Attributed Graphs: Application to the risk mapping of Leptospirosis in New Caledonia ».
- Under the supervision of Pr. Nazha Selmaoui-Folcher and Pr. Philippe Fournier-Viger.

Master Degree – Applied Mathematics and Statistics
University of Bordeaux, France
2017 – 2019
- Minor Statistic and Stochastic Modelling.

Bachelor Degree – Applied Mathematics and Computer Science
University of Bordeaux, France
2014 – 2017
- Minor Business Administration.

Projects

Hackathon (CASSINI.eu)
University of New Caledonia / L2K Innovation
2021 – June
- European entrepreneurship-oriented Hackathon.
- Final ranking: 1st in France, 3rd in Europe.

BigData Project (Airbus Defence and Space)
INSA Toulouse / University of Bordeaux, France
2019 – October to December
- Contest (Kaggle-like) between multiple schools.
- Subject : Use of Deep Learning for the classification of satellite images containing wind turbines.
- Under the supervision of Pr. Jérémie Bigot.
- Final ranking: 7th/64.

Communications

Apr 2023 — Scientific research at the service of data.
Oral communication. Meetup « data ». ISI.nc – OoTech

Nov 2022 — Popularizing science (*Speed-Searching*).
Oral communication. Science Fair. University of New Caledonia

Sep 2022 — Evolving and Dynamic Attributed Graphs: Application to the risk mapping of Leptospirosis in New Caledonia.
Poster. Doctoriales. Pacific Doctoral School (ED469)

Scientific Publications

[9] Govan, R., Scherrer, R., Goarant, C., Cannet, A., Fournier-Viger, P., Selmaoui-Folcher, N. (2025, January). **Cartographie du risque épidémiologique : le défi des données déséquilibrées**. In *Revue des Nouvelles Technologies de l'Information, 25èmes Journées Francophones Extraction et Gestion des Connaissances, EGC 2025*, vol. RNTI-E-41. (pp. 159-170). *hal-04945686*

[8] Govan, R., Scherrer, R., Fougeron, B., Laporte-Magoni, C., Thibeaux, R., Genthon, P., Fournier-Viger, P., Goarant, C., Selmaoui-Folcher, N. (2025). **Spatio-temporal risk prediction of leptospirosis: A machine-learning-based approach**. *PLOS Neglected Tropical Diseases*, 19(1), e0012755. *10.1371/journal.pntd.0012755*

[7] Thibeaux, R., Genthon, P., Govan, R., Selmaoui-Folcher, N., Tramier, C., Kainiu, M., Soupé-Gilbert, M.-E., Wijesuriva, K., Goarant, C. (2023). **Rainfall-driven resuspension of pathogenic Leptospira in a leptospirosis hotspot**. *Science of The Total Environment*, 168700. *10.1016/j.scitotenv.2023.168700*

[6] Govan, R., Selmaoui-Folcher, N., Giannakos, A., Fournier-Viger, P. (2023). **Co-location Pattern Mining Under the Spatial Structure Constraint**. In: Strauss, C., Amagasa, T., Kotsis, G., Tjoa, A.M., Khalil, I. (eds) *Database and Expert Systems Applications. DEXA 2023.* Lecture Notes in Computer Science, vol 14146. Springer, Cham. *10.1007/978-3-031-39847-6_13*

[5] Govan, R., Selmaoui-Folcher, N., Giannakos, A., & Fournier-Viger, P. (2023, July). **Extraction de co-localisations sous contrainte de la structure spatiale**. In *CNIA 2023-Conférence Nationale en Intelligence Artificielle, PFIA* (No. 53-61). *hal-04164263*

[4] Tokotoko, J., Govan, R., Lemonnier, H., Selmaoui-Folcher, N. (2022). **Multiscale and Multivariate Time Series Clustering: A New Approach**. In: Ceci, M., Flesca, S., Masciari, E., Manco, G., Raś, Z.W. (eds) *Foundations of Intelligent Systems. ISMIS 2022.* Lecture Notes in Computer Science(), vol 13515. Springer, Cham. *10.1007/978-3-031-16564-1_27*

[3] Scherrer, R., Govan, R., Quiniou, T., Jauffrais, T., Lemonnier, H., Bonnet, S., & Selmaoui-Folcher, N. (2022). **Real-Time Automatic Plankton Detection, Tracking and Classification on Raw Hologram**. In *International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics* (pp. 25-39). Springer, Cham. *10.1007/978-3-031-20837-9_3*

[2] Scherrer, R., Govan, R., Quiniou, T., Jauffrais, T., Lemonnier, H., Bonnet, S., & Selmaoui-Folcher, N. (2021, November). **Automatic Plankton Detection and Classification on Raw Hologram with a Single Deep Learning Architecture**. In *CIBB 2021 Computational Intelligence Methods for Bioinformatics and Biostatistics*. *hal-03565469*

[1] Tokotoko, J., Selmaoui-Folcher, N., Govan, R., Lemonnier, H. (2021). **TSX-Means: An Optimal K Search Approach for Time Series Clustering**. In: Strauss, C., Kotsis, G., Tjoa, A.M., Khalil, I. (eds) *Database and Expert Systems Applications. DEXA 2021.* Lecture Notes in Computer Science(), vol 12924. Springer, Cham. *10.1007/978-3-030-86475-0_23*