Contact

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www.linkedin.com/in/joffreyjoumaa
(LinkedIn)
sesjo.github.io/portfolio/ (Portfolio)

Top Skills

Data Analytics
Data Visualization
Science

Languages

Français (Native or Bilingual)
Anglais (Full Professional)
Espagnol (Elementary)

Publications

Characterization of postdive recovery using sound recordings and its relationship to dive duration, exertion and foraging effort of southern elephant seals (Mirounga leonina)

Elephant seals as ecosystem sentinels for the northeast Pacific Ocean twilight zone.

Digital evolution: Novo Nordisk's shift to ontology-based data management.

Variation in body condition during the post-moult foraging trip of southern elephant seals and its consequences on diving behaviour.

Adjustment of diving behaviour with prey encounters and body condition in a deep diving predator: the Southern Elephant Seal

Joffrey Joumaa

PhD | Product Owner | Data Management | Data Analytics | Digital Transformation
Copenhagen, Capital Region of Denmark, Denmark

Summary

Data-driven and innovative professional with a proven track record in both industry and academia, specializing in machine learning, data visualization, and advanced data management strategies. At Novo Nordisk, I combined technical expertise and leadership to drive innovation through automation, knowledge graph development, and collaboration across teams.

Key achievements include:
- Developing a graphRAG-based chat application as part of a proof of concept.
- Acting as Product Owner to ensure team continuity and successful project delivery.
- Contributing to data management strategy by establishing data contracts.
- Leading efforts in knowledge graph development and ontology embedding for semantic search and reconciliation automation.

I am passionate about advancing into leadership roles where I can combine strategic vision with technical expertise to drive impactful outcomes.

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Experience

Novo Nordisk
1 year 9 months

Ontology and Semantic Engineering - Product Owner
January 2025 - Present (4 months)
Copenhagen, Capital Region of Denmark, Denmark

- Coordinating the efforts of a diverse, cross-functional team of 6 professionals across 4 countries.
- Leading the development of a knowledge graph that transforms internal unstructured data into actionable insights.

- Driving the creation and implementation of semantically enriched data contracts to enhance data interoperability and governance.
- Collaborating to deliver controlled terminology aligned with ontologies, improving data consistency across the organization.
- Managing the product backlog and engaging with over 20 stakeholders to ensure successful project deliveries as part of a broader digital transformation strategy.

Semantic Engineer - Ontology Steward
August 2023 - December 2024 (1 year 5 months)
Copenhague, Région de la Capitale, Danemark

Leveraged technical expertise and leadership skills to drive innovation and enhance data management through automation, knowledge graph development, and effective team collaboration.
- Designed and implemented pipelines in Azure DevOps to trigger EC2-based scripts for ontology testing.
- Successfully developed a chat application using a graphRAG-based approach as part of a proof of concept (POC).
- Stepped into the Product Owner (PO) role to support the team during the PO's absence, ensuring project continuity and delivery.
- Contributed to establishing data contracts, shaping the organization's data management strategy.
- Actively contributing to the development of a comprehensive knowledge graph for structuring and parsing complex datasets.
- Leveraged ontology embeddings to enable semantic search and initiated the development of automated ontology reconciliation processes.

University of California, Santa Cruz
Data Scientist
October 2021 - July 2023 (1 year 10 months)
Santa Cruz, Californie, États-Unis

Turning raw information into valuable marine ecology research by leveraging data collected using new cutting edge tags (i.e. mainly motion sensors) deployed in northern elephant seals:
- Classification (DBSCAN, k-means)
- Dash application (dash, python)
- R package development
- Containerization (Docker)
- Supervision of undergraduate students

Thegreendata
Data Scientist
April 2020 - August 2021 (1 year 5 months)
Ville de Paris, Île-de-France, France

Developed econometric models and decision-support tools to help stakeholder in the agriculture sector becoming data-driven
- Classification (k-means, Random Forest, hierarchical clustering, CART)
- Dimensionality Reduction Algorithms (PCA)
- Prototyping (Shiny, Dash)
- Time series forecasting (ARIMA family)
- Regularized Regression (LASSO, Ridge)
- Simulation (Monte Carlo)

Saegus
1 year 5 months

Data Scientist - Groupama
January 2020 - March 2020 (3 months)
Paris et périphérie

- Leveraged data from call routing to improve and align customer experience among all regional entities (Spark, Dataiku)
- Transposed several conversion rate models initially developed with SAS, towards new solutions with Python and Dataiku.

Tableau Practice Leader - Bolloré Transport & Logistics
July 2019 - December 2019 (6 months)
Région de Paris, France

- Provided support and expertise on various projects initiated with Tableau (Desktop, Prep and Server)
- Helped with the creation of a Data Vizualisation pole within Bolloré
- Community manager to help with the adoption of Tableau

Data Analyst - L'Oréal
November 2018 - June 2019 (8 months)
Région de Paris, France

- Build reports and dashboards to monitor KPIs (Key Performance Indicators), understand drivers of KPI changes
- Data visualization creation, maintenance and support in a worldwide context (> 3500 users, 64 countries)
- Implementation of an influencers monitoring page

IT&M STATS

Biostatistician - Da Volterra
July 2018 - October 2018 (4 months)
Région de Paris, France

- Implementation of statistical analysis for 16S metagenomic data (parametric and non-parametric tests, mixed models with random effects or repeated measures, adjustment for multiple testing)
- Management of subcontracting analyses

Malakoff Médéric
Data Analyst
December 2017 - June 2018 (7 months)
Région de Paris, France

Withing the Customer Service Department:
- Implementation of a customer call reminder segmentation based on text fields filled by phone operators
- Text Mining (Topic Modeling, Regular Expression, Cloudword)
- Data Visualization (ggplot2, Shiny, D3.js, Plotly)

CNRS - Centre national de la recherche scientifique
3 years 2 months

PhD
October 2013 - November 2016 (3 years 2 months)
Beauvoir sur Niort

By using machine learning to analyze bio-logging data collected from tagged southern elephant seals (Mirounga leonina), the objectives of my PhD were to investigate the diving and predation behaviours of the largest phocid in the world, without ever seeing it.

• Regression (Logistic, Linear, Additive, ...)
• Classification (Random Forest, K-means, KNN, SVM, ...)
• Statistics (Multivariate Analysis, PCA, ...)
• Signal Processing (Spectral Estimation, Signal Filtering)
• Optimal Foraging Theory, Optimal Diving Theory
• Movement Ecology (3D Trajectory Reconstruction using Dead Reckoning Methods, First Passage Analysis)

This PhD was carried out with financial support from the DGA (Direction Générale de l'Armement) and in collaboration with the SMRU (Sea Mammal Research Unit, University of St Andrews, Patrick Miller).

Fieldworker

September 2014 - November 2014 (3 months)
Kerguelen Islands

- Tagging and tag recovery on Southern elephant seals

- Elephant seals pups monitoring

- Field missions logistics (team organization, time management, ...)

- Capture, anesthesia and blood sample on elephant seals

Carrefour
Warehouseman
August 2013 - September 2013 (2 months)
Angoulins

CNRS - Centre national de la recherche scientifique
Intern
January 2013 - June 2013 (6 months)
Villiers en Bois

"Adjustment of fishing effort by southern elephant seal in response to prey patch quality"

Optimal diving models investigate how predators should adjust their diving behaviour to optimize their foraging efficiency. In this study we used Time-Depth-Recoders and 3D accelerometers to investigate diving behaviour of six post-breeding females southern elephant seals (SES) (Mirounga leonina) in response to prey patch quality. On 22700 dives recorded, dive angles, swimming effort, animal's body density and when prey are captured in dives were assessed from acceleration data. Increase in bottom time duration was related to diving depth according to a quadratic relationship in absence of prey catch attempts. Bottom time duration was shorter in dives with captures than without, due to increased bottom swimming effort when fishing. In presence of captures, bottom time duration increases with number of prey captured at the bottom but decreases with these during ascent and descent phase. Total amount of surface time to restore oxygen reserves was related to an increase of total dive duration and total swimming effort provided during dives, but not to total number of prey capture attempts. These results suggest that SESs adjust their dive duration at fine scale in response to patch quality. (supervisor: Christophe GUINET)

CNRS - Centre national de la recherche scientifique
Intern
June 2012 - July 2012 (2 months)
La Rochelle

Analysis of diving behavior of gray seals (Halichoerus grypus) from telemetry data obtained by Iroise Marine Natural Park. (Littoral Environnement et Sociétés (CNRS - UMR 7622), supervisor: Cécile VINCENT)

CNRS - Centre national de la recherche scientifique
Intern
January 2011 - February 2011 (2 months)
La Rochelle , France

Seasonal variation of energy density of preys of marine mammals in the Bay of Biscay (Littoral Environnement et Sociétés (CNRS - UMR 7622), supervisor: Jérôme SPITZ)

Massey University
Intern
May 2010 - July 2010 (3 months)
Nouvelle-Zélande

Density and distribution of common dolphins (Delphinus sp.) in the Hauraki Gulf, New Zealand (Coastal Marine Research Group, supervisor: Sarah DWYER)

Darty
Seasonal Employee
August 2007 - August 2007 (1 month)
Bondy (93, France)

In charge of the inventory of computer stock.

Roby
Warehouseman
July 2007 - July 2007 (1 month)
Noisy le Sec

Roby
Warehouseman
August 2005 - August 2005 (1 month)
Noisy le Sec

Education

Université de La Rochelle
PhD, Quantitative Ecology · (2013 - 2016)

Université Paul Sabatier (Toulouse III)

Master 2 (M2), Biodiversité, Écologie, Évolution · (2012 - 2013)

Université de Bretagne Occidentale

Diplôme Universitaire : Découvertes du monde de l'entreprise, Biologie marine et océanographie biologique · (2011 - 2012)

Institut Univesitaire Européen de la Mer

Master 1 Sciences de la Mer et du Littoral, Sciences Biologiques Marines · (2010 - 2011)

Université de La Rochelle

Licence Biologie - Biochimie, Biologie et Écologie Marines · (2009 - 2010)