

Colas Damien, PhD

Product Owner, biomedical datascience

Neuroscientist and product owner. Conducted research in both academic and industrial setings. Produced 30+ research papers or patents. Design and analysis of research projects in pharmacology, innovative physiological sensors, alzheimer's, autism, aging, cognition, sleep. Usage of python, statistics and machine learning for signal processing, data analytics, insight discovery and data viz. Usage of product owner methodologies for market|user needs discovery & product line strategies. Managed teams of software development. International experience with ~10 years at Stanford University. Team player.

Education & Trainings

2004
Doctor in Neuroscience
University of Lyon, France

2001
MSc Major neurophysiology / Minor applied mathematics
University of Lyon, France

2020-2021
Datasciences/Machine Learning
Stanford University Continuing studies [WSP 160, WSP 364, WSP 365, STAT 05, CS 08, CS 67] / INRIA [Machine learning with python and scikit-learn]

2019
Sleep medicine post graduate degree
University of Lyon, France

Expertise

- Data analytics
- Biostatistics
- Bio signals processing (ExG, MEMS)
- Time series
- Machine Learning | Deep Learning
- Python
- Team Management
- Product Owner
- Research design
- Scientific writing
- Key Opinion Learder Management

Experience

April 2024 - Current
Bubo Bio-Sciences I Lyon, France (biomedical consulting)
Independent Consultant | biomedical datasciences and R&D

- Axoltis pharma: EEG pharmacology analysis + benchmark on *in silico* trials
- Zleep, an AI based app for insomnia: scientific counselling, prompt engineering, organised app testing, review of clinical best practise (CBTi), sensors sourcing, board management
- a medical company: search state of the art on NLP and clinical semantic analysis using LLMs, build a POC quantitative database from pdf corpus, performed biostatistics and designed a dataviz dashboard on real world data (upcoming publication), KOL management
- Aequil : sleep medicine market opportunities analysis, road map framing
- Participation in AI specialized meetings (ex meetup inria nlp, BioTechX)
- +Recurring business : polysomnography analysis for sleep doctors (40% FTE)

May 2022 - April 2024
NETRI I Lyon, France (biotech microfluidics neuro organ-on-chips)
Head of Digital Lab and Product Owner Datasciences

- Netri is a biotech company in the field of microfluidics, stem cells, organoids and neurosciences
- Managed a team of 6 datascientists and software engineers
- Developed analytics pipelines and signal processing for electrophysiology (python)
- Product owner for electrophysiology, microscopy and data platform solutions (worked with business leadership and clients, used a decision tree for ranking opportunities)
- Defined the product line strategic planning, user stories and requirements
- Designed and conducted customers interviews based on *concept-products* and follow-up
- Design and wrote scientific proposals for external clients (episkin/L'Oreal, Pierre Fabre, ...)
- Managed python software development projects : delivered 1- a commercial software for neuro data extraction and viz, 2- an internal data plateform for ML signatures (https://netri.com/wp-content/uploads/2024/10/Neurons-as-a-biodigital-sensor.pdf).
- Proposed several licences/business models. Supported the commercial success of the products.
- Scientific writing

January 2021 - April 2022
Bubo Bio-sciences I Lyon, France (biomedical consulting)
Independent Consultant | biomedical datasciences and R&D

- Exemple Clients : Axoltis, Soladis, Naox, Noviga, Athena bio-consulting
- Analysed clinical database, performed biostatistics and dataviz.
- Electrohysiological signal processing (developped an extensive feature extraction toolbox)
- Machine Learning : Developped an automated polysomnography algorithm based on XGBoost
- Medical writing
- Extensive trainings on Machine Learning, Statistics, NLP and python programming (Stanford Continuing studies (WSP 160, WSP 364, WSP 365, STAT 05, CS 08, CS 67))

July 2019 - Dec 2020
Bioserenity I Paris, France (medtech and medical services)
Product line manager and scientific engagement

- Bioserenity is a medical service and medical device company in the area of sleep medicine, neurology and cardiology
- Defined the unmet medical needs and best practises of the area (sleep medicine)
- Proposed a product and innovations roadmap for the executive comitee
- Sourced and tested the medical devices necessary to setup an innovative medical service as envisioned in the road map (remote sleep apnea diagnostic).
- Designed and monitored a clinical study aiming at comparing various machine learning algorithm for the automatic detection of sleep disorders.
- Used biomedical statistics to analyze an EEG dataset ("real world data").
- Wrote a clinical paper on covid and EEG as early sign of severity
- Wrote clinical guidelines about sleep medicine for internal use of medical teams
- KOL management and external scientific engagement (clinical research projects, comitee)

Contact

Phone
+33 (0) 6 66 66 78 38

Email
d.colas@bubo-biosciences.com

Address
19 chemin des petites brosses
69300 Caluire
France

LinkedIn
linkedin.com/in/damiencolas

Google Scholar
lhttps://scholar.google.com/citations?user=aQI43ZEAAAAJ

Language

French (Native)

English (full professionnal efficiency)

Societies

Current : AASM / SFRMS
Former : SRS / SFPT

References

Thibault Honegger
CEO NETRI
thibault.honegger@netri.fr

Samir Medjebar
GENERAL MANAGER BIOSERENITY
samir.medjebar@bioserenity.com

Craig Heller
PROFESSOR, STANFORD UNIVERSITY
hcheller@stanford.edu

Experience

Aug 2016 - July 2019
Holi I Lyon, France (medtech startup sleep medicine)
Chief Scientific Officer

Holi was an innovative medtech startup, in the field of sleep diagnosis, developing sensors and apps

- Defined the medical needs, state of the art and competitive landscape
- Identified and managed KOLs (key opinion leaders)
- Defined the product road map (actigraphy, sound analysis (through smart phone recordings), sleep apneas detection (through the analysis of accelerometers data and R-R intervals)
- Setup and managed a research team (2 datascientists, 1 PhD student, 2 developers)
- Designed the research strategy
- Areas studied:
  - actigraphy / accelerometry
  - ECG , EEG, EMG
  - nocturnal sound (smartphone)
  - breathing
  - techs: python, signal processing, machine learning, biostatistics
- Used statistics and ML on reference database to identify the sensors|signals most prone to quality issues or providding the most physiological informations in order to guide the innovation strategy of the company
- Designed and managed a clinical study (including data collection and biostats)
- Wrote papers and technical memos for patents
- Managed the team
- Participated in fund raising (including a kick starter campaign)

March 2015 - Jul 2016
Eridanis I Paris, France (tech and innovation consulting)
Senior consultant in life science

- Eridanis (now part of Keyrus) was a tech consulting company specialized in internet of things (IoT)
- designed a connected health program for the employees of a major energy provider company (Enedis)
- studied the factors influencing health trajectories of employees
- identified sensors that could be integrated in a personalized dashboard
- wrote a white paper for the company
- supported the primary client for its go/nogo meetings with his stake holders
- Supported the commercial team for business development

Sep 2014 - March 2015
CNRS Institute of Cellular and Integrative Neuroscience I Strasbourg, France (research)
Senior researcher

- Setup new EEG technics
- Conducted research in circadian, light, aging and Alzheimer neurobiology
- Analyzed data (biostats and data viz)

2006 - 2014
Stanford University I Palo Alto, USA (neuroscience and teachning)
Research team Leader

- Fundamental research, teaching, mentoring and scientific writing
- Used experimental methods in electrophysiology, pharmacology, behavior and cognition
- Used cellular and molecular technics to characterize biomarkers of diseases and treatment efficacy
- Developped EEG biomarkers of diseases and treatment efficacy
- Used biostatistics and data viz
- Managed the lab
- Mentored undergrad, PhD students and postdoc
- Areas studied: neurology, sleep disorders, cognition, aging, Alzheimer, Austism, Down syndrome
- Published >30 original fundamental research papers

2004 - 2006
Stanford University I Palo Alto, USA (neuroscience)
PostDoc

- Biomarkers of Alzheimer's at the EEG level + the hypocretin/orexin system in arousal pain.