Offer #2025-08567

Machine learning engineer in digital health research

Contract type : Fixed-term contract

Renewable contract : Yes

Level of qualifications required : Graduate degree or equivalent

Other valued qualifications : PhD thesis

Fonction : Temporary scientific engineer

About the research centre or Inria department

The Inria center at Université Côte d'Azur includes 42 research teams and 9 support services. The center's staff (about 500 people) is made up of scientists of different nationalities, engineers, technicians and administrative staff. The teams are mainly located on the university campuses of Sophia Antipolis and Nice as well as Montpellier, in close collaboration with research and higher education laboratories and establishments (Université Côte d'Azur, CNRS, INRAE, INSERM ...), but also with the regional economic players.

With a presence in the fields of computational neuroscience and biology, data science and modeling, software engineering and certification, as well as collaborative robotics, the Inria Centre at Université Côte d'Azur is a major player in terms of scientific excellence through its results and collaborations at both European and international levels.

Context

The position will be located within the Inria-Inserm team COMPO (COMputational Pharmacology in Oncology) in the La Timone health campus in Marseille. The team is composed of mathematicians, data scientists, pharmacists and clinicians and is a unique multidisciplinary environment focused on developing novel computational tools for decision-making in clinical oncology.

The position is funded by the France 2030 Digital Health PEPR research program, under the project "Pharmacological Digital Twins" (DIGPHAT). This consortium brings together methodological teams in machine learning, statistics, bioinformatics and mechanistic modeling (at Inria: COMPO, HeKA, PreMeDICaL, as well as at CEA) and clinical pharmacology teams (CHUs in Limoges, Toulouse, Grenoble, and others).

Assignment

The recruited person will be in charge in supporting the research activities of the consortium with software development.

Main activities

The main tasks include:

- Developing and maintaining machine learning code libraries in collaboration with consortium partners.
- Developing code for generating synthetic data from "real" databases.
- Creating unified databases from public multi-omics datasets.
- Exploring hybrid modeling approaches that combine AI and mechanistic methods, such as neural ODEs, discovering the analytical form of ODEs using methods like D-CODE, or approaches based on LLMs.

Main activities :

- Data exploration and visualization
- Biostatistics (e.g. statistical tests, survival analysis)
- Statistical reporting (notebooks, apps (e.g., shiny))
- Machine learning (unsupervised and supervised)

Additional activities :

- Data exploration and visualization
- Biostatistics (e.g. statistical tests, survival analysis)
- Statistical reporting (notebooks, apps (e.g., shiny))
- Analyze the requirements of the project partners
- Write synthetic and meaningful reports and scientific publications

Skills

Skills required :

- Excellent programing skills (R/python)
- Familiarity with real-world data analysis
- Ability to communicate with healthcare practitionists
- Strong background in statistics

Benefits package

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities
- Access to vocational training
- Contribution to mutual insurance (subject to conditions)

Remuneration

From 2692 € gross monthly (according to degree and experience).

General Information

- **Theme/Domain** : Computational Neuroscience and Medicine Statistics (Big data) (BAP E)
- **Town/city** : Marseille
- **Inria Center** : Centre Inria d'Université Côte d'Azur
- **Starting date** : 2025-04-01
- **Duration of contract** : 2 years
- **Deadline to apply** : 2025-03-31

Contacts

- **Inria Team** : COMPO
- **Recruiter** :
  Benzekry Sebastien / Sebastien.Benzekry@inria.fr

About Inria

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

The keys to success

Strong motivation to apply computational methods to concrete health problems

> **Warning** : you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.

Instruction to apply

Applications must be submitted online on the Inria website. Collecting applications by other channels is not guaranteed.

Defence Security :
This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST).Authorisation to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

Recruitment Policy :
As part of its diversity policy, all Inria positions are accessible to people with disabilities.