Biomedical Informatics Laboratory - InCor

Open Positions for Scholars
Natural Language Processing and Health Data Integration

The Biomedical Informatics Laboratory (LIB - InCor), part of the Heart Institute at the Hospital das Clínicas, Faculty of Medicine, University of São Paulo, is seeking researchers and students to support our efforts in scientific endeavors focused on cutting-edge natural language processing and innovative data integration in the healthcare domain.

About the positions

We are looking for bright and enthusiastic students and graduates to join our team and spearhead groundbreaking research in realms of Natural Language Processing using Large Language Models, Machine Learning, and the Integration of diverse health data. Dive into exciting projects involving entity identification in medical texts, encoding entities into standard healthcare terminologies, temporal visualization of clinical data, analysis and mapping of data to standardized models in healthcare, such as those used in the National Health Data Network (RNDS).

The available positions encompass diverse educational levels, each accompanied by a 12-month scholarship. The scholarships are extendable for up to 36 months, subject to the performance of the scholarship holder. The scholarship category will be compatible with the candidate's experience and qualifications.

Qualifications*:*

Scholarship Category	Educational Level or Professional Experience
IDT - A	• Bachelor's degree • IT technician with a minimum of two years of proven experience
IDT - C	• Master's degree or medical residency • Graduate with a minimum of four years of experience • IT graduate with a minimum of two years of proven experience
IDT - G	• PhD • Master's degree or medical residency with a minimum of eight years of proven experience • IT graduate with a minimum of seven years of proven experience
IDT - I	• Postdoctoral Fellowship • PhD with a minimum of four years of experience • IT graduate with a minimum of ten years of proven experience

Regardless of the scholarship category, the following requirements apply.

- Strong mathematical and computational skills;
- Knowledge with clinical terminologies and practices;
- Proficiency in at least one of the following areas: (1) Natural Language Processing; (2) use of data model standards in healthcare; (3) health coding standards;

- Proficiency in at least one of the following knowledge groups: (1) in-depth knowledge of artificial intelligence models and Large Language Models, proficiency in Python language, and experience with tools such as TensorFlow, Pytorch, and Scikit-Learn; (2) knowledge of relational and non-relational databases, SQL querying skills, familiarity with ETL tools, and proficiency in languages such as Python or Java; (3) knowledge of medical coding systems, such as ICD-10 and SNOMED-CT, and proficiency in languages such as Python or Java;
- Desirable proven track record of productive research and/or publications.

Benefits of joining us:

Beyond being part of a visionary and collaborative team, you will share an environment that fosters continuous learning and celebrates innovation. You'll have access to cutting-edge technological resources, exciting training opportunities, and the chance to leave your mark at the forefront of technology and healthcare.

About us:

Since 1979, LIB - InCor has been at the forefront of pioneering research, development, and implementation of cutting-edge Information Technology solutions tailored for the medical domain. Over the decades, our group has evolved into a beacon of excellence, setting the standard for innovation in Brazil, particularly in the realms of image and signal processing, as well as medical information systems. In recent years, our pursuit of excellence has propelled us towards the realms of medical data analysis and integration. Through the fusion of textual, omics, images, and signals data, we strive to revolutionize disease treatment with targeted and precise treatments. Furthermore, our team has been involved in the application of cutting-edge artificial intelligence and deep learning techniques to estimate biomarkers and uncover new patterns within patient data.

This is your chance to make a real impact in healthcare innovation – join us on this exhilarating journey today!

Send your Curriculum Vitae, a brief statement of your research interests, and two letters of reference to the email sinfojobs@incor.usp.br, indicating "NLP-Med Scholarship Applicant 2024" in the subject line.

Visit our website at http://www.incor.usp.br/sites/spdweb or scan the QR code for more information about the group.

Come and join us in shaping the future of Medicine through the power of technology!