Davide Placido

Data Scientist, Biomedical/Bioinformatics Engineer

About

Copenhagen Capital Region 2100 Denmark

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daplaci

Personal website

Machine learning

Advanced

Pytorch Keras Scikit-learn Numpy Pandas Google Colab 🤗 Transformers

Programming

Advanced

Python R SQL

Intermediate

Bash LaTeX JavaScript Matlab

Basic

C Rust Assembly

Data management

Advanced

Snakemake PostgresSQL duckDB BigQuery Json Git

Cloud

Intermediate

GCP AWS On-premise

DevOps

Intermediate

Github actions Docker CI/CD

Languages

Italian *(Native speaker)*
English *(Fluent)*
Danish *(PD3)*

With my BSc and MSc degrees in biomedical engineering complimented by my recent PhD in Bioinformatics and Biostatistics, I believe my profile is a very good fit for the role as Post-doc/Data Scientist in Healthcare Data Predictive Modelling at Novo Nordisk. During my last 4 years of research experience I have worked on predictive models using real world data (electronic health records and Danish registries) resulting in numerous published tools and research articles. This allowed me to develop the technical skills required for this job, including developing and validating ML models across multiple healthcare systems, applying survival analysis in non conventional models, and developing viable, secure, and maintainable software solutions. While my background could be applicable to numerous data science jobs, my passion for healthcare has kept my focus within health-related industries, especially at Novo where there are so many applicable areas that pique my interest. My research experiences and internal/international collaboration efforts have additionally cultivated my problem-solving skills when developing wide-serving complex data science solutions. These skills in addition to my strong technical background and project team experiences have prepared me well to be an effective communicator. I believe I fulfil the requirements as listed within the job advert and look forward to the opportunity to present myself in person to discuss my potential contributions further.

Experience

Rigshospitalet

02/2024 - Present

Data Scientist

I am currently working on data standardisation and development of predicting models to inform trials at the intensive care unit.

University of Copenhagen

02/2023 - 01/2024

Postdoctoral researcher

Building on previous work, I worked on the development of DL models for cancer detection and the integration of new data modalities.

University of Copenhagen

04/2019 - 01/2023

Research assistant and PhD

NLP Neural networks Entity embeddings ICU Pancreatic cancer Medical images

In this period I conducted research at the Novo Nordisk Center for Protein Research. I have been actively working on various projects encompassing machine learning applications on diverse and unique datasets, including registries, electronic health records and medical images. Notably, I worked on the development of models for early detection of pancreatic cancer using patients' disease history from the Danish registries. I also worked on the development of a decision support tool for detecting clinical deterioration using EHR collected in the general depertments. Other projects involved survival analysis in the ICU and pharmacovigilance using NLP techniques.

Harvard Medical School

01/2022 - 07/2022

Visiting researcher

generalizability GCP cloud computing

This experience was part of the change of research environment of my PhD. In this period I visited Chris Sander's lab in Boston, continuing working on pancreatic cancer prediction. In particular, the aim of my visit was testing the generalizability of the model trained on the Danish data on a US dataset. To accomplish this, I had to deploy the ML model on a new cloud, Google cloud platform, and develop a new pipeline for the data preprocessing.

Technical University of Denmark

09/2018 - 02/2019

Research master student

time-series ICU monitors empirical mode decomposition LSTM

This research project was part of my master thesis. In this period my task was to try improving current mortality risk models in the intensive care unit (ICU). In particular, I worked on time-series collected by monitors in the ICU to enhance an LSTM model using hand-crafted features from high-frequency data.

Education

University of Copenhagen
01/2020 - 01/2023

Copenhagen, Denmark

PhD Bioinformatics and Biostatistics

Polytechnic University of Turin
01/2017 - 01/2019

Turin, Italy

Master degree Biomedical engineering

Polytechnic University of Turin
01/2013 - 01/2017

Turin, Italy

Bachelor degree Biomedical engineering

Publications

A deep learning algorithm to predict risk of pancreatic cancer from disease trajectories

05/2023

Nature Medicine

Placido D, Yuan B, Hjaltelin JX, Zheng C, ..., Brunak S, Sander C

Development of a dynamic prediction model for unplanned ICU admission and mortality in hospitalized patients

06/2023

PLOS digital health

Placido D, Thorsen-Meyer H-C, Kaas-Hansen BS, Reguant R, Brunak S.

Discrete-time survival analysis in the critically ill: a deep learning approach using heterogeneous data

09/2022

Nature digitial medicine

Thorsen-Meyer HC, Placido D, Kaas-Hansen B.S, Nielsen AP, .. Perner A, Brunak S

Language-agnostic pharmacovigilant text mining to elicit side effects from clinical notes and hospital medication records

07/2022

Basic and Clinical Pharmacology and Toxicology

Benjamin Skov Kaas-Hansen, Davide Placido, Cristina Leal Rodríguez, ..., Stig Ejdrup Andersen

Teaching Activities

Bridge course: Big Data II
University of Copenhagen

Development of neural networks for registry data

Python Tsunami
University of Copenhagen

Introductive course on Python language

Certificates

DevOps, DataOps, MLOps
Duke University *05/2023*

Enterprise Model Deployment
IBM *05/2021*

ML, Visual Recognition and NLP
IBM *05/2021*