Sérgio Luiz Rodrigues de Oliveira Junior

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COVER LETTER

Having a degree in Computer Engineering by CEFET-MG, I've worked as a chatbot developer for a large part of my professional career. Being an interdisciplinary field, it allowed me to explore related fields, such as data analysis, UX writing, product and agile management. Due to my undergraduate thesis and my interest in working alongside business units, I've grown closer to Data Science, and now I'm looking for an opportunity to start working in this area. I have a lot of experience with Python, having developed Machine Learning models using neural networks, decision trees, logistic and linear regression. I've also worked with git and CI/CD pipelines as part of the development of .NET APIs. I believe that working as a Data Scientist will bring me the professional satisfaction that I look for and allow me to grow with the company.

PROFESSIONAL BACKGROUND

08.2021
04.2022
(8 months)

Chatbot Developer,
Localiza Labs (consulting) – Framework Digital
· Chatbot development using Blip platform.
· General support to the Scrum Master during agility rituals.

12.2020
08.2021
(8 months)

Software Engineer,
[R&D] Customer Solutions – Take Blip
· Chatbot development using Blip platform.
· API's development in ASP.NET.
· CI/CD pipelines build on Azure DevOps.
· Mediation, in conjunction with team members of different specialties, of how to make our OKRs definition more efficient.

03.2019
02.2020
(11 months)

Technology Intern,
CDI (Development and Innovation Coordination) – Unimed-BH
· Business interface between IT and customer relationships teams.
· Chatbots development in conjunction with several business areas of the company.
· General support to the analysts on prototyping and new solutions development.

10.2017
03.2019
(18 months)

Computer Intern,
CPA (Standing Committee on Assessment) – CEFET-MG
· Java application development towards the automatization of the creation process of CEFET-MG technical and bachelor courses reports. Such reports are obtained from forms fulfilled semesterly by the students.
· Committee's decision-making process participation as student representative.

ACADEMIC BACKGROUND

03.2020 08.2020	**Hochschule München** Munich, Germany Computer Engineering international program
02.2016 05.2021	**Centro Federal de Educação Tecnológica de Minas Gerais (CEFET-MG)** Belo Horizonte, Brazil Computer Engineering Bachelor's Degree

LANGUAGES

Portuguese	Mother Tongue
English	C1 Level
German	A1 Level

PUBLICATION

CBIC 2021 (Portuguese only)	**Prediction Models for the Interest Rates of _Tesouro Direto_'s IPCA Securities (http://dx.doi.org/10.21528/CBIC2021-11)** Launched by the Brazilian Federal Government at the end of 2002, the _Tesouro Direto_ platform makes it possible for individuals to purchase government securities, characterizing it as a safe fixed-income investment that is more profitable than savings. Considering the variations that the interest rates of these securities undergo over time, there is the possibility of obtaining profits above the initially agreed upon purchase/sale rate at the right time. Thus, this work proposes the use of machine learning models, more precisely the MLP, CNN and LSTM neural networks, in an attempt to create a model for forecasting the interest rates of four floating-rate Brazilian government securities bonded to the country's inflation rate (IPCA). To this end, some features of the Brazilian economy that could have a more direct impact on _Tesouro Direto_ rates were analyzed and defined. Computer simulations were performed with variations in the presence of these features in the datasets, so that the best prediction model could be identified. In the end, it was concluded that CNN has a better overall result, even though it is more sensitive to feature removal. In contrast, the MLP presents almost constant errors, regardless of the variable being removed. In addition, it was found that the CDI, an important investment metric, has a negative impact on the forecasting capacity of the models, due to its proximity in value to the Selic rate.