DaeLink: Vaga de Emprego para Deficientes

Alex Expedito Silva Santos, Etec Zona Leste, Alex.santos462@etec.sp.gov.br

Andreza Maria de Souza Rocha, Etec Zona Leste, e-mail

Danilo Santos Soares, Etec Zona Leste, Danilo.soares31@etec.sp.gov.br

Endrigo Gustabo Brandão de Oliveira, Etec Zona Leste, Endrigo.oliveira2@etec.sp.gov.br

Jerfeson Roberto de Lima, Etec Zona Leste, e-mail

**RESUMO.**  Este trabalho aborda a inclusão de pessoas com Deficiência (PCD) no mercado de trabalho por meio de um sistema baseado em plataformas digitais que promovem conectividade. As cotas para PCD frequentemente não são preenchidas devido à falta procura das empresas e ao preconceito. Embora existam ações para estabelecer cotas para PCD, a inclusão enfrenta desafios significativos, resultando em menores taxas de participação no mercado de trabalho comparadas as de pessoas sem deficiência. O objetivo do estudo é desenvolver uma plataforma digital que promove inclusão profissional para facilitar a integração de PCD no mercado de trabalho. A metodologia empregada inclui a análise das necessidades de PCD e empresas. Os resultados indicam a criação de um protótipo de sistema, composto por um site e um aplicativo que pode ser utilizado para empresas preencherem vagas remanescentes dentro de suas instituições. A sua construção é pensada essencialmente para empresas, consistindo em um site e aplicativo que mostram os principais candidatos para vagas remanescentes de determinadas áreas. Portanto demonstra-se que a plataforma tem a capacidade de estabelecer uma melhor eficácia de inclusão de PCD no mercado de trabalho.

**Palavras-chave.** Inclusão; PCD; Mercado de trabalho; Plataformas digitais; Ferramentas

***Abstract.*** This work addresses the inclusion of People with disability (PWD) in the labor market through a system based on digital platforms that promote connectivity. Quotas for PWD are often not filled due to a lack of demand from companies and prejudice. Although there are actions to establish quotas for PWD, inclusion faces significant challenges, resulting in lower participation rates in the labor market compared to people without disabilities, the study objetive is to develop a digital platform that promotes professional inclusion to facilitate the integration of PWD into the job market. The theoretical support used to include the analysis of the needs of PWD and companies. Results reveal indicate the creation of a prototype system, consisting of a website and an application that can be used by companies to fill remaining vacancies within their institutions. Its construction is essentially designed for companies, that showcase the main candidates for remaining vacancies in certain areas. Therefore, the project can be qualified to enhance the inclusion of PWD in the Labor Market.

**Keywords.**  Inclusion; PWD; Labor Market; Digital platform; Tools.

# 1. introduction

The inclusion of people with disabilities (PWD) into the labor market through digital connectivity platforms represents a topic of significant relevance. Although there are several social initiatives aimed at the inclusion of PWD in society at larger, the quotas established for PWDs into companies are still insufficiently filled due to the lack of demand from companies. (G1,2019).

The labor market participation rates and formalization of people with disabilities aged 14 and over are significantly lower, labor market participation rates (23.8%) and formalization (34.3%) than people without disabilities, whose rates are 66.3% and 50.9% (IBGE apud CNN Brazil, 2023).

A of the main factors that limit PWD access to the labor market is prejudice. Studies indicate that many companies are still not willing to hire people with disabilities, due to lack of knowledge about the capabilities of these professionals. (CNN Brazil, 2024).

Social inclusion through professional qualification programs has shown positive results, This is evidenced by the introduction of Law No. 8.213, which defines social security benefits, but there´s still a long way to go. (CNN Brazil, 2024).

Therefore, it is essential to seek solutions that facilitate the integration between companies and PWD, increasing opportunities and hiring these professionals through new technology, promoting a more inclusive society. Thinking in this sense, the question arises as to why the quotas for PWDs in the labor market are not filled, and how can a digital platform for professionals help in the integration of these people into companies? Therefore, the hypothesis formulated is that the use of a digital system specifically aimed at the connection between companies and people with disabilities can increase the filling rate in the labor market, facilitating the recruitment process and overcoming current barriers, such as prejudice. To achieve this goal, this facilitates the integration of people with disabilities into the labor market that will promote a more inclusive work environment and increase the filling of quota vacancies.

The initial stage involved a bibliographic review of the inclusion of PWD into the labor market, with emphasis on inclusion studies and tools for the creation of a digital platform that promotes the filling of remaining vacancies along with analyses of existing digital platforms that promote the social and professional inclusion of PWD.

# 2. Theoretical Foundation

This chapter aims to abstract all the stages of theoretical foundation for the understanding of this article together with the presentation of concepts and technologies. Aiming to demonstrate all the theoretical basis of the DAELink platform.

# 2.1 Challenge of inclusion in the labor market for people with disabilities

According to the G1(2023), about 18.6 million Brazilians aged two and over have some type of disability, and inclusion remains a challenge in Brazil due to the lack of accessibility and adequate support. Data from the Brazilian Institute of Geography and Statistics (IBGE,2022) proves that these people face greater difficulties to enter the labor market about (28.3%) with disabled and (66.3%) without disabilities.

As stated by CNN (2022), unemployment among people with disabilities is higher than among those without disabilities and this inequality mainly affects young people. These people also receive lower incomes, about two-thirds of the values of those without disabilities, with a higher incidence of extreme poverty, especially in sectors such as domestic services and agriculture

# 2.1.1 Laws and solutions for business and people with disabilities

The Brazil establishes that companies with one hundred employees our more are required to fill 2% to 5% with people with disability, known as of law quotas, according to article 1 of law No 8,213, of July 24, 1991:

Article 1 – Social Security, by means of contributions, aims to ensure its beneficiaries indispensable means of maintenance, due to incapacity, involuntary unemployment, advanced age, length of service, family burdens and imprisonment or death of those on whom they depended economically. (BRAZIL,1991)

Although it has been in force for almost thirty years, according to UNICAMP (2020) it is still not fully complied with, there are still challenges for inclusion to happen due to the low specificity of the legislation and qualification.

For G1(2017) technology is increasingly present in everyday life and many companies do not meet this necessity. This is due to the lack of an accessible system, generating a gap in the connection of people with disabilities. Therefore, there is a need to create a system facility this digital integration. A solution of a digital connectivity platform can promote social inclusion and improve these people´s access to the labor market.

# 2.2 DaeLink system for companies to fill their vacancies for people with disabilities

The Project is based on the creation of system for web, mobile application baes on JavaScript languages and with a cloud database, making business users establish connections in a simplified way, and thus fill their vacancies, through a chat recommendation system, and the availability of vacancies. For this to occur, the tools described below were used.

**2.3.4 React Vite**

React is a library JavaScript used for creating interface in a partitioned manner, which can be combined into components. Ranging from websites to mobile applications (REACT).

Designed to simplify and speed up the creation of interfaces, created by Jordan Walke, an engineer at Facebook, in 2011. It has now become the most popular JavaScript library (SILVA, 2021).

Vite comes from the French meaning “Fast”, demonstrated in its proposal to be a tool that allows the creation os front-end projects in na accessible way, being light and pratical, bringing creative concepts to web page (REACT VITE).

Figure 1 – React Vite base design

A screenshot of a computer

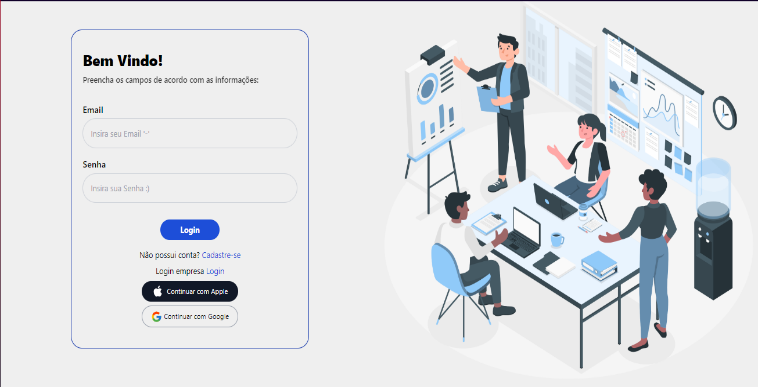
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Fonte: From the author (2024)

**2.3.1 React native**

In line with Escudelario and Pinho (2020), React Native is a platform based on React, enabling the creation of hybrid applications, running on IOS (apple) and Android, being created by Facebook in 2013. React Native can be defined as an open-source framework that aims to create native aplicattions, that is, there is web layer as an interface, but the native application itself. (LEITÃO, 201, apud GRANDE; TANAKA, 2023).

Figure 1 – ENGETEC 2018 Conference



Fonte: From the author (2024)

**2.2.3 Expo**

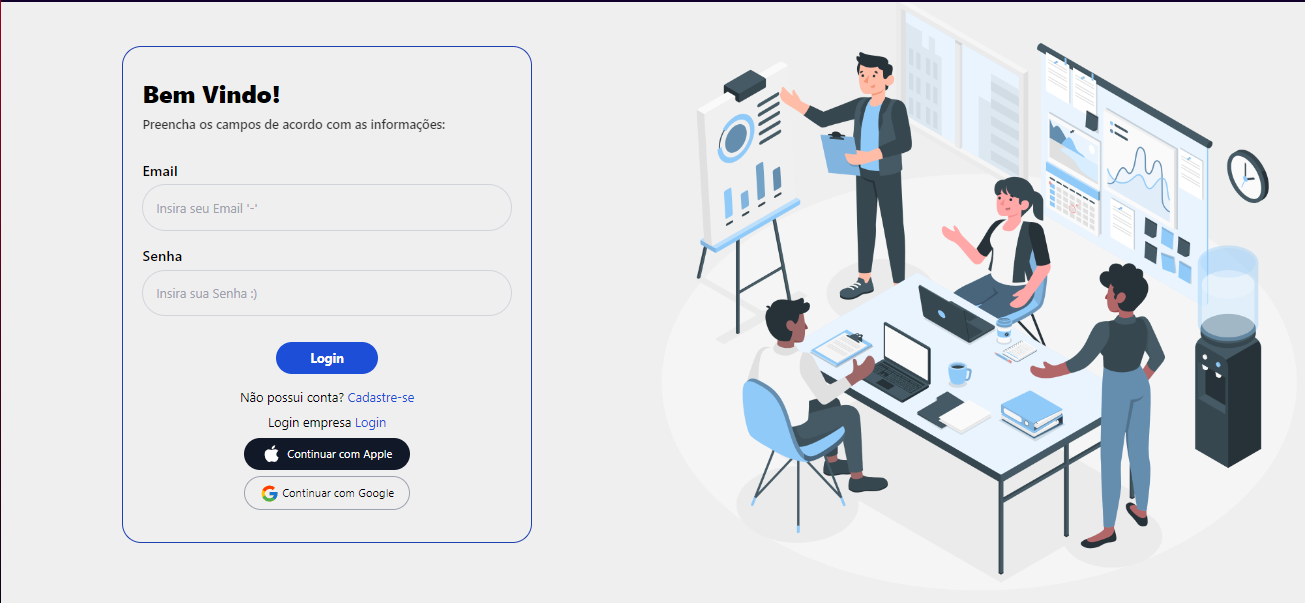
Expo as well as the react´s “create-react-app" package provides the creation of all the necessary structure to develop an application, providing an environment for the easy creation of applications (ESCUDELARIO; PINHO,2020). Therefore, Expo is a tool used in mobile creation with React Native that allows easy access to some native APIs of the device without needing to install any dependency or change native code (ROCKETSET,2020).

**2.3.1 Python**

According to Matthers (2016) Python is an extremely efficient programming language due to fact that programas constain dewer lines of code, helping to build “clean” code, obtaining a quick understanding and debugging.

In concordance with McKinney, (2018) Python can often have additional packages installed, not included in the Anaconda distribution, one of them being pip which is a program that manages and takes care of the installation of Python packages. In this sense there are two types: Conda and pip both serve different purposes, Conda offers general package management for a wide variety of languages in the Conda environment, and pip offers services specifically for python (MUELLER, 2020).

Figura 1 – ENGETEC 2018 Conference



Fonte: From the author (2024)

**2.3.1 Marchine learn**

Machine Learning uses data filtering to crate new information, generating significant results, enabling intelligent decision-making through the data gererated, (KNEUSEL, 2024). Technology is constantly evolving, and machine learning becomes crucial for the advancement of varius commercial areas, being adopted by today´s largest companies such as Netflix (DOMINGOS, 2017).

**2.3.1 FireBase**

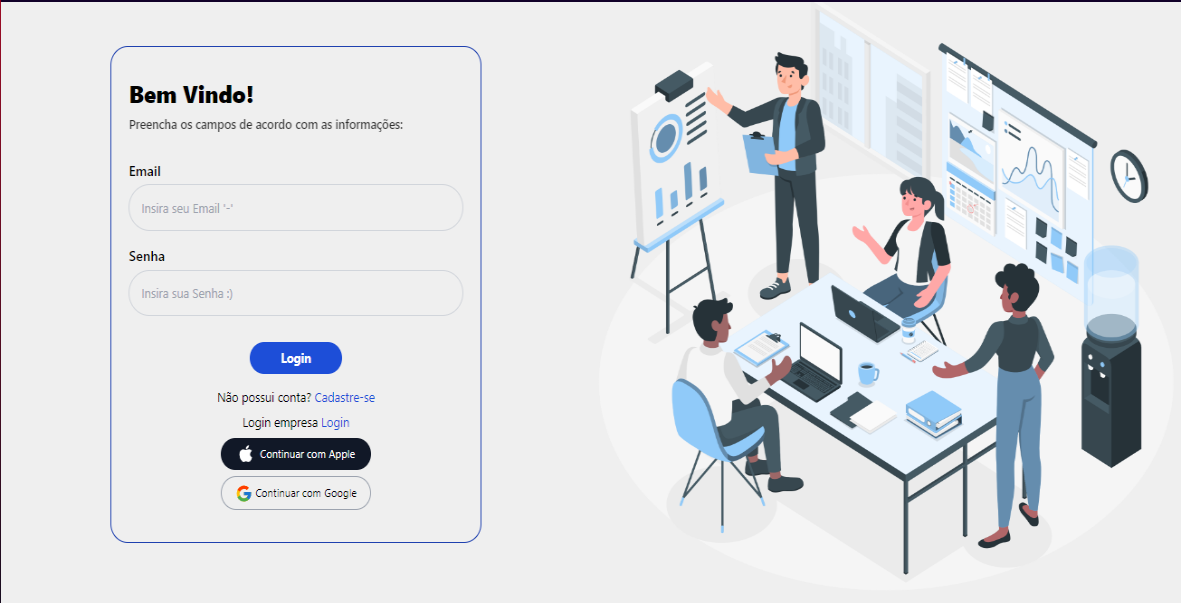
Firebase Database is an effective method of database creation, making use of JSON for real-time updating along with cloud storage concepts, making it versatile for various projects (FIREBASE).

**2.3.1 UML**

The Unified Modeling Language is a visual representation to use to help understanding the system in its logical part, beign an accepted Intenational standard for software (GUEDES, 2018).

Used to carry out a complete project, it needs to be able to be changed later and allow a better understanding between customers and developers (PEREIRA, 2011). In general terms through the diagrams that make up the UML, the entire project is approached in different technical ways to obtain a better result in its completion (GUEDES, 2018)

Figura 1 – ENGETEC 2018 Conference



Fonte: From the author (2024)

# 3. Materiais e métodos

# 4. resultados e discussão

# 5. Conclusão

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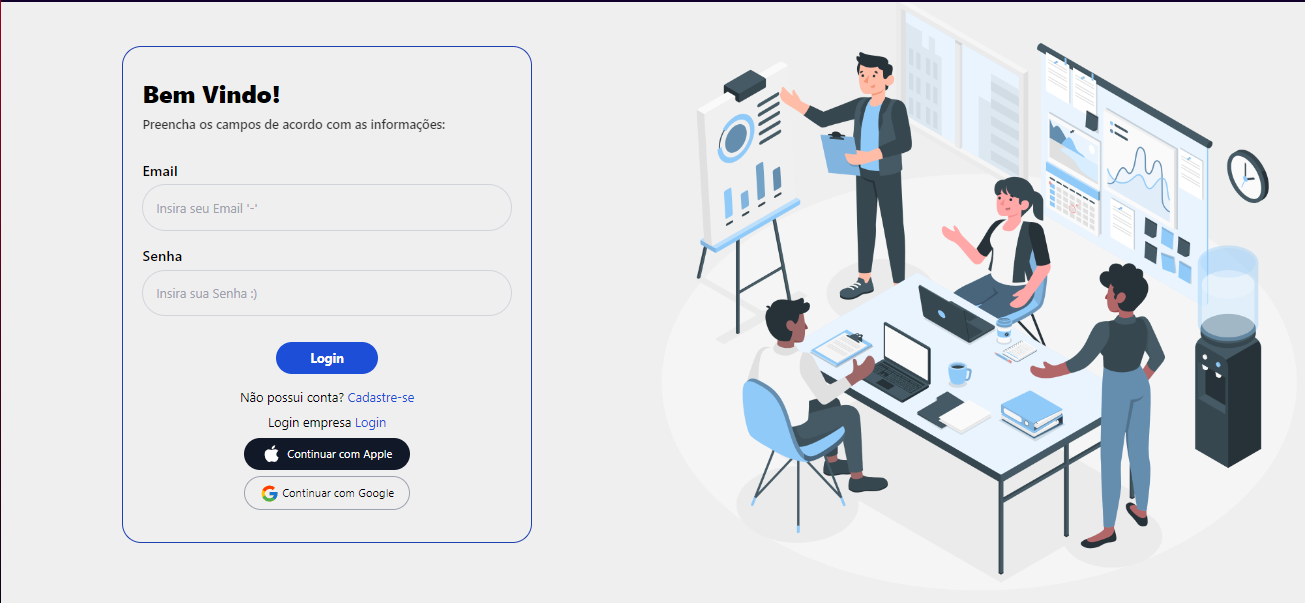
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## 1.1 Exemplo de figuras

As figuras podem ser usadas para ilustrar o artigo sempre que necessário. Deve constar legenda numerada acima e a fonte abaixo, com o tamanho da fonte de 10 pontos, centralizado.

Figura 1 – ENGETEC 2018 Conference



Fonte: From the author (2024)

## 1.2 Exemplo de tabelas

As tabelas devem ter a legenda da tabela numerada acima de cada tabela, com tamanho de fonte de 10 pontos, centralizado. Sem linhas de grade, e com a formatação preferencialmente como no exemplo.

Tabela 1: ENGETEC 2021

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| **Topics** | **Font Size** | **Format** |
| Title | 18 | Times New Roman, centralized |
| Authors and Identification | 11 | Times New Roman, centralized |
| Abstract | 10 | Times New Roman, justified, without indent |
| Keywords | 10 | Times New Roman, italic, justified, without indent |
| Introduction | 12 | Times New Roman, justified, withouy indent |
| Figure and Table | 10 | Times New Roman, centralized |
| Material and Methods | 12 | Times New Roman, justified, without indent |
| Results and Discuss | 12 | Times New Roman, justified, without indent |
| Conclusion | 12 | Times New Roman, justified, without indent |
| References | 11 | Times New Roman, justified |

Fonte : ENGETEC (2021)

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