

CIEG - JobDApp

Documentation

Credit Incentive Employment Generation

This decentralised application has been built to make the job posting, job recruitment and rewards awarding transparent and decentralised. This DApp aims to implement a public employment record management system which connects students with employers. Various functionalities include posting a job requirement, applying for the same by a candidate or a student, adding a performance matrix, keeping track of the reward the job provider passed to the candidate and many more. The platform makes the necessary details available so that another potential job provider can have a history of the performance matrix of the candidate for the particular job that he/she enrolled for.

There are various issues in recruiting a student for an internship or for a job. This DApp tries to solve the problems like keeping track of the jobs posted, applicants and their public data, the performance of the candidate for the particular job/internship, and the reward that has been given for the job to the candidate by the employer and more in a public ledger so that transparency is achieved. The data that a candidate wishes to share are visible to job providers. No sensitive private data of the candidate is made available public.

The application front end has been developed in Angular. Angular is a javascript framework which is used to build single page applications. The applications backend is built on ethereum. Smart contract has been developed in solidity and has been developed locally with the help of ganache application from truffle suite.

Architectural Pattern

Admin

Here the smart contract owner can add different addresses as employers. The address that an admin adds is treated as a verified employer.

The data required for adding verified employers are

- Address
- Name

The data displayed in the admin component is the list of all verified employers.

Add Job/Internship

Here the verified employers can add a job posting for a possible recruitment. The form asks for various data inputs like,

- Employer verification ID
- Company Name
- Job Title
- Job Location
- Job Type
- Reward

Home

Here the data of the job posting made available by the employers are displayed. The candidate can apply for the job posted here. Another option available on this page is for viewing the enrolled candidate. If no candidate enrolled for the particular job then a dummy data will be displayed. From the card that displays the candidate details there's another option to view the performance matrix of the candidate.

The job posting can be closed when an applicant applies for the job.

Candidate

The candidate can enter the details to enroll for the job. The data requested are,

- Name
- Age
- Phone number
- Email
- Institution name
- Qualification

Performance matrix

The performance matrix can be added by the employer for a candidate. If the data is already present then there's an option to view the same. Job details data is displayed on this screen along with the performance matrix.

Project Takeaways

- Solidity comments are provided as per NATSPEC format.
- Saved gas cost by clustering similar data types, structures and functions.