TANMAY RAJESH MACHKAR

SOFTWARE ENGINEER | BE IN CS @ SPPU MESWCOE

Cell no: +91 **8421825998**
LinkedIn Profile
Email: tanmaymachkar9@gmail.com
Portfolio

Currently pursuing a Bachelor of Engineering (BE) at Savitribai Phule Pune University (SPPU) with a passion for leveraging cutting-edge technologies in blockchain and AI/ML. Experienced in designing and developing decentralized applications (DApps), smart contracts, and token-sharing platforms using Solidity, Hardhat, and React. Skilled in creating machine learning models, including deploying predictive solutions with Flask backend and React frontend.
Demonstrated proficiency in technical writing, with hands-on experience in LaTeX and the successful publication of a research paper. Well-versed in problem-solving and algorithm development, with a solid foundation in both theoretical and practical aspects of blockchain and AI/ML. Eager to deepen expertise in deep learning and contribute to innovative solutions that bridge the gap between blockchain and AI/ML technologies. I am building my expertise through courses in Artificial Intelligence, with plans to advance further my knowledge in courses like Deep Learning.

SKILLS SUMMARY

- **Languages**: Java, C++, Python, JavaScript, HTML, CSS, Solidity, SQL, LaTeX
- **Frameworks**: React, NextJs, Pandas, Numpy
- **Databases**: MySQL, PostgreSQL, MongoDB
- **Backend**: ExpressJS, Flask
- **Concepts**: Data Structures and Algorithms, RESTful APIs, Smart Contracts, Decentralized Apps (DApps), Data Visualization, etc.

PROJECTS

CHAT BUDDY | MISCELLANEOUS
Experience the ultimate chatting Dapp (Decentralized App), meticulously built on the Ethereum Blockchain using Solidity. Immerse yourself in a world of seamless communication where you can create your account, invite friends, and indulge in endless conversations that will keep you engaged all day long! Rest assured, your data will remain secure on the blockchain, ensuring your privacy and security.

- Libraries used -> Hardhat, Ethers, Web3Modal
- Languages used -> Solidity, JavaScript, CSS
- Framework used -> NextJS
- Resources used -> Metamask, Vercel

TOKEN STAKING DAPP | MISCELLANEOUS
Experience the ultimate Token Staking Dapp (Decentralized App), meticulously built on the Ethereum Blockchain using Solidity. It uses blockchain technology that allows users to stake ERC-20 tokens, withdraw them, and earn reward tokens based on their staked amount. This secure and transparent platform incentivizes token holding and boosts user engagement, while enhancing the liquidity and utility of ERC-20 tokens.

- Libraries used -> Hardhat, Ethers, Web3Modal, ghpages
- Languages used -> Solidity, JavaScript, CSS
- Framework used -> ReactJS
- Resources used -> Metamask, ERC-20 Tokens

CRYPTO SHARE | MISCELLANEOUS
Experience the ultimate crowdfunding Dapp (Decentralized App), meticulously built on the Ethereum Blockchain using Solidity. Create campaigns to raise ethers, donate to other campaigns, and join our vibrant community of supporters today! Start funding the future, one campaign at a time, and be a part of something revolutionary in the world of decentralized finance.

- Libraries used -> Hardhat, Ethers, Web3Modal
- Languages used -> Solidity, JavaScript, CSS
- Framework used -> NextJS
- Resources used -> Metamask, Vercel

E-CERTIFICATE | RESEARCH PAPER (SIH 2023)
Developed a decentralized application (DApp) that uses blockchain technology to securely issue, store, verify, and validate academic certificates. The system integrates Ethereum smart contracts, IPFS for decentralized storage, and PBKDF2-SHA256 hashing for enhanced data security. Certificates can be verified by cross-referencing their hash with blockchain records, ensuring authenticity and eliminating the risk of forgery. Key stakeholders include government administrators, educational institutions, and independent verifiers, fostering trust and transparency. This tamper-proof framework significantly improves the efficiency and reliability of certificate issuance and validation processes.

- Libraries used -> Hardhat, Ethers, Web3Modal, ghpages

- Languages used -> Solidity, JavaScript, CSS
- Framework used -> ReactJS
- Resources used -> Metamask

BOSTON HOUSE PRICING | MISCELLANEOUS

This project is designed using linear regression to predict house prices based on various factors that influence the housing market. By analyzing data from the Boston housing dataset, it provides valuable insights into how features like location, property size, and neighborhood amenities affect house prices. The goal of the project is to help users estimate property values accurately and efficiently, whether for potential buyers, sellers, or investors. By leveraging data-driven predictions, it empowers users to make informed decisions in the dynamic real estate market.

- Libraries used -> numpy, pandas, seaborn, matplotlib, pickle
- Languages used -> Flask (Backend Server), JavaScript, CSS
- Framework used -> ReactJS
- Resources used -> Jupyter Notebook, Render (Backend Deployment), Vercel (Frontend Deployment)

PUBLICATION

- **INDIAN SOCIETY FOR TECHNICAL EDUCATION**
  Online Blockchain Based Certificate Validation System for Government Organization (Vol. 47) ISTE OCT-DEC 2024

EDUCATION

BE in Computer Science | Savitribai Phule Pune University, Pune September 2022 – Present

First Year CGPA: 9.18
Second Year CGPA: 9.05
Third Year CGPA: *Ongoing*

PERSONAL DETAILS

D.O.B. - 12.02.2003
Gender - Male
Languages - English, Marathi, Hindi
Place of residence - Dhanori, Pune