# Crypto Job Posting, Draft 1.

Mozaic is an AI-powered DeFi startup that helps people efficiently make smart and safe decisions on their crypto activities. Unlike others, we envision tapping into the cutting-edge Machine Learning technology to guide our operating machines to learn quantitatively the underlying process of crypto markets. The system will be a blend of off-chain and on-chain components. The on-chain part will have cross-chain inter-operability between our smart contracts deployed on different chains.

## You will be in charge of

- Developing smart contracts and their SDK, in collaboration with other engineers.

## You will be supervised by

- the CEO, who has extensive experience in systematic trading and DeFi.

## You are expected to:

- Have good communication skills and work ethics.
- Be an experienced OOP programmer,
- Be familiar with crypto, blockchain, smart contract programming , and dApp/DeFi

#### You will be given technical interviews

- with questions, the range of which is shown in Appendix,
- with requests for the on-site demonstration of programming skills,

# Appendix. Test questions

### OOP must-read and test questions

- https://www.educative.io/blog/object-oriented-programming
- We will give you a simple architectural design task where you have to find
  - a plausibly good OOP architecture and justifications
  - a possible inefficient non-OOP architecture and criticism
- We will give you UML diagrams that you have to explain

### Javascript/Typescript must-read

- https://www.w3schools.com/js/
- https://www.w3schools.com/typescript/

### node.js must-read

- https://www.w3schools.com/nodejs/

### Blockchain/Solidity

- Bitcoin consensus algorithm
- https://ethereum.org/en/developers/docs/evm/
- https://www.tutorialspoint.com/solidity/solidity_variables.htm
- https://www.tutorialspoint.com/solidity/index.htm

### Hardhat

- Practical contents of hardhat.config.js file.
- Typical Hardhat tools

### dApp/Math/DeFi

- https://docs.ethers.org/v5/single-page/#/v5/api/providers/
- openzeppelin basic contracts
- Pancakeswap/Uniswap v2 (core, periphery, farm)
- Balancer https://balancer.fi/whitepaper.pdf
- Uniswap v3 https://uniswap.org/blog/uniswap-v3
- LayerZero (optional) https://github.com/LayerZero-Labs/LayerZero
- https://academy.binance.com/en/articles/impermanent-loss-explained