BO·TT·EGA
IT minds

Program szkolenia:

Web3 and blockchain in a nutshell

Informacje:

Nazwa:	**Web3 and blockchain in a nutshell**
Kod:	**web3-nutshell**
Kategoria:	Web 3.0
Odbiorcy:	kierownicy projektów, analitycy, liderzy techniczni, DevOps, Product Owners, developerzy, Scrum Masters, liderzy zespołów, architekci
Czas trwania:	2 dni
Forma:	wykłady i warsztaty

Zalety szkolenia:

- Critical thinking
- Use cases
- Project examples

BOTTEGA IT minds

Szczegółowy program:

1. Web3 introduction

- 1.1. hype vs hate - media, science, governments
- 1.2. fundamentals - "read-write-own", "read-write-trust"

2. Blockchain

- 2.1. fundamentals - distributed ledger, consensus, Byzantine Fault Tolerance, double spending, Blockchain Trilemma
- 2.2. consensus - Proof of Work (Bitcoin example), Proof of Stake (Ethereum and Cardano examples), Proof of Authority, Proof of Time, Proof of Storage/Capacity, mining and staking

3. Why? for what? Use cases and project examples (with tokenomy analysis):

- 3.1. token economy - a new business model
- 3.2. cryptocurrencies - the native fuel
- 3.3. NFT - ownership
- 3.4. DeFi and DeFI 2.0 - finance
- 3.5. DAO - governance
- 3.6. Play-to-Earn and Metaverse - entertainment and lifestyle

4. Technical and development

- 4.1. Ethereum
  - 4.1.1. Ethereum foundation, EIP, ERC, ...
  - 4.1.2. fundamentals - transaction, gas, nodes, Merkle Trees, testnets
  - 4.1.3. smart contracts - EVM, Solidity, IDEs (REMIX)
  - 4.1.4. deploying own ERC-20 (token) and ERC-721 (NFT) contract
  - 4.1.5. integration via Web3.js
- 4.2. More advanced topics
  - 4.2.1. storage - IPFS, Filecoin
  - 4.2.2. oracles (Chainlink)

BOTTEGA IT minds

4.2.3. maximal extractable value (MEV), flash loans

4.2.4. The Graph - blockchain + GraphQL

5. Future

5.1. scaling - L2 solutions, sidechains (Polygon), rollups - optimistic (Optimism, Arbitrum) vs zero-knowledge (SNARK, STARK)

5.2. sharding

5.3. stateless clients (Verkle Tree)