

George Cowart

Senior Software Engineer

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CORE COMPETENCIES

Languages: Rust, Typescript, C/C++, Python, Solidity, SQL, Go
Frameworks: Actix, React.js, Svelte.js, Express.js, Next.js, Nest.js, Web3.js, Ethers.js, solana/web3.js, FastAPI, Django
Data Visualization: WebGL, D3.js, Three.js, MapBox, GreenSocks
Web3: Solana/Anchor, Polkadot/Substrate, NEAR, Ethereum, IPFS, Moralis, Alchemy, ENS
Orchestration: Docker, K8s
Cloud: AWS Lambda, RDS, S3, CloudFront, EC2, VPC, SQS, Firebase

WORK HISTORY

The Arcadia Group

Senior Software Engineer

September 2018 - September 2022 (Fulltime)

- Develop and maintain NFT marketplace using Rust, Actix, React.js, PostgreSQL, Typescript, Web3.js, Node.js and Solidity.
- Architected the frontend project from scratch, making them more DRY, more secure, and more efficient to develop further using Typescript, React and Redux.
- Connected a 3D engine to a React component so that it is in sync with the Redux state and reacts to state changes.
- Built up REST APIs using Nest.js which is connected with Postgres and implemented Opensea API integration.
- Wrote smart contracts to mint NFTs using ERC721, Openzeppelin, Hardhat and Truffle.
- Implemented Web3 Authentication, Event sync on Moralis.
- Built secured, flexible, and modular coding structure which interact with Moralis Cloud and Moralis Database.
- Integrated Alchemy SDK APIs into the NFT marketplace projects.
- Built up the web3 apps and integrated with smart contracts using the thirdweb.
- Helped to integrate Ethereum and ERC20 tokens into an exchange that is currently being built. It included address generation, token listing, and basic wallet operation related to ether and tokens using Web3.js and Ether.js.
- Built up the ENS marketplace project from scratch using React.js, subgraph, GraphQL, web3.js and pulled data using Hasura from PostgreSQL database.
- Get the connected wallet interactions with contract and show it in the UI using subgraph.
- Developed gRPC APIs using Rust to fetch all accounts data in Solana and store them on PostgreSQL.
- Develop and main the Gosuto wallet which is running on the Casper network.
- Used popular crates like libp2p, waves-rust, cyber-rs, monero-rs, rust-abci, etc.
- Wrote smart contracts for Solana, CosmWasm using Rust.
- Built a decentralized exchange using the Substrate framework, that has been deployed on both Kusama and Polkadot and enabled users to exchange +\$40M worth of assets.
- Fascinated by Solana Smart Chain and NFT fields and dive into the development of Dapp- scaffold anchor project and NFT projects with Metaplex.
- Deployed contracts on Ethereum mainnet and testnets using multisig and automation to uphold top security and privacy standards.
- Designed and deployed smart contracts for tokens and ICOs including token vesting, refund vaults, and multi-signature wallets.
- Ensure code quality and software reliability from naming to structuring in Solidity, and React projects.
- Deployed the graph node on BSC and fetched the historical price and transaction history through subgraph.
- Built development & deploying serverless structure with AWS Lambda, CloudFormation, DynamoDB, S3, AWS AppSync, SES, Cognito, Secret Manager, IAM.
- Built native Web3 tooling in Python that automated competitor activity analysis and provided insight into other cryptographic protocols.
- Built Exchange Server, trading backend with high-speed performance, designed for cryptocurrency exchanges, can support up to 10k+ trades every second and real-time user/market data notification to client with websocket.
- Provided server-side rendering with React and AWS Lambda and AWS API Gateway to reduce cost from idle server time.
- Implemented an authentication solution using AWS Cognito to enable multiple clients to sign in to a cloud-based application using SAML federation.
- Followed both agile and test-driven development techniques and achieved over 90% unit-test coverage.
- Developed a fully functional decentralized application (DApp) with React.js frontend communicating with the Ethereum blockchain.
- Working with main DeFi protocols: Uniswap (forked and developed products on V1 & V2), PancakeSwap, QuickSwap, JustSwap.

Fujitsu

Software Engineer

December 2013 - March 2018 (Fulltime)

- Built an interactive charting tool to allow a user to chart, graph, filter, and sort data in different ways.
- Contributed to the implementation of a user-customizable report creator with 30+ chart types and support for real-time data with filtering and segmentation.
- Implemented a back-end REST API for real-time location updates using Python, PostgreSQL, and Google Map API & Data Structure and Algorithm, IoT.
- With a revamped API service, integrated with multiple external services for payment, shipping and inventory system.
- Created a remote authentication system to integrate the SaaS platform with documentation site to enable the inline display of relevant platform information.
- Developed a highly visual-rich application for a digital marketing agency built with vanilla JavaScript that utilizes custom-created JavaScript and CSS animations.
- Developed a cross-platform computational geometry math library in C++.
- Contributed to the project investigating the usage of Hadoop/MapReduce and clouds (Amazon EC2/Eucalyptus) for the analysis of post-genomic data.
- Worked on a high-availability Linux-based cluster (HA), integrating and configuring Pacemaker for network-attached storage (NAS).
- Designed and developed C++ classes to access SQLite databases; also designed the database schemas
- Used custom animations without libraries to build a pixel-perfect, eye-catching product.
- Built GraphQL and REST services for end-users across the educational space that are consumed by mobile apps, web applications, and internal reporting services.

EDUCATION

Kyushu University | B.S in Computer Science

2009-2013