Taylor Dawson

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SUMMARY

Experienced Full-stack Developer with over 6 years of comprehensive expertise in software engineering, specializing in blockchain technology. Highly skilled in developing scalable and robust applications using React, NextJS, and GraphQL. Adept at working within state machine-based architectures to manage complex user workflows. Possesses a strong commitment to product-oriented development and continuous iteration. Known for a proactive approach to problem-solving, with a knack for identifying and prioritizing tasks that align with project goals. Passionate about exploring the capabilities of web3 technologies and fostering community engagement.

EXPERIENCE

Fullstack Engineer
Blocknative   January 2021 –October 2023, Remote, US

· Implemented numerous features both in the frontend and the backend, ranging from real-time data processing to API design and development.
· Developed a tiered cache system to synchronize state across distributed systems and harmonize servers' internal memory stores, significantly reducing latency by averting cache misses post-implementation; transformed a 970ms delay on cache miss to near-instantaneous data retrieval, enhancing user experience with speedier data access.
· Designed and developed a Python API wrapper SDK for Blocknative's platform.
· Integral in the development and launch of Web3Onboard, an open-source, framework-agnostic JavaScript library to onboard users to web3 apps, used by top companies in the web3 space such as Curve, Compound, and Zapper.
· Proactively developed a Chrome extension leveraging our ML-powered gas prediction algorithms, which accrued over 70k users, achieved a 4.6-star rating, and became featured on the Chrome Web Store.
· Shepherded entire product development cycles, from inception to launch, enhancing my experience in product management and execution.
· Optimized our backend TypeScript service handling event delivery via WebSockets by identifying and resolving memory leaks and employing a functional programming approach to drastically reduce memory usage from 3000MB to 150MB (a 95% reduction).

Founding Engineer
OpenSea   February 2020 – July 2020, Remote

· Coordinated user feedback with the engineering team and translated them into product specs and requirements that would address user needs.
· Worked across the full software stack in a fast-paced agile environment, emphasizing swift execution and high-quality output.
· Developed and shipped user-facing features using React, benefitting over 100,000 monthly active users.
· Translated complex designs and business requirements into high-quality, maintainable code.
· Built and shipped REST & GraphQL API endpoints in a large-scale production environment, which both reduced monthly spending and decreased average page load times.
· Managed real-time data processing and cacheing using Redis messaging queues.
· Collaborated closely with Product Management and UX/UI Design teams to translate user feedback into actionable product requirements and specs.
· Maintained and refactored both frontend and backend codebases, adhering to industry best practices for code quality and maintainability.

Open-source Developer / Developer Advocate
Amberdata   September 2018 – February 2020, Remote

· Spearheaded Amberdata's initiative to boost developer engagement amongst the open-source community, specifically, in the blockchain space.
· Responsible for creating an open-source JavaScript wrapper for Amberdata's JSON-RPC REST/WS API be used by numerous projects and companies building upon Amberdata's platform.
· Created and maintained API documentation for the JavaScript wrapper and API for over 150 endpoints.
· Built critical integration tests for our API, which resulted in reduced downtime and fewer software bugs.
· Developed marketing/outreach material seen by thousands of existing and potential customers.
· Developed content for and delivered online and in-person presentations to over a hundred people in total.
· Created and maintained containerized applications using Docker.
· Gained exposure to message bus and queuing technologies - Kafka.
· Created/edited video tutorials of how to use Amberdata's platform to reduce the friction of user onboarding.

PROJECTS

Ethereum Slot Visualizer
Blocknative · https://github.com/taylorjdawson/SlotZViZ · April 2023 - June 2023
· Developed an interactive frontend application using Next.js & Typescript, enabling users to dynamically visualize Ethereum slot bids.
· Seamlessly integrated Supabase for robust authentication and efficient data storage.

· Implemented the MEV Boost relay API, facilitating real-time retrieval of bid data from relays.

· Enhanced user insights with responsive visualization components crafted with D3.js.

4337 Dashboard

Blocknative · https://4337.blocknative.com/ · February 2023 - April 2023

· Pioneered a real-time dashboard that provides insights into user operations based on the intricate ERC-4337 specification.

· Orchestrated a seamless migration from Supabase to AWS's provisioned RDS, ensuring scalability and performance as product demands grew.

· Technologies leveraged: Svelte for interactive UI, Typescript for type-safe code, and Postgres for reliable data storage.

Tiered Caching System

Blocknative · January 2022 - April 2023

· Engineered a sophisticated tiered caching mechanism, optimizing data retrieval processes across distributed server systems.

· Deployed Redis as a mediator to synchronize server memories, drastically reducing cache miss penalties: streamlined data retrievals from either Redis or Postgres, updating all interconnected servers in real-time.

· Established fail-safe protocols ensuring data integrity and availability, even under high load or unexpected system behaviors, enhancing overall system reliability.

Blocknative Gas Fee Estimator for ETH & MATIC

Blocknative · https://chrome.google.com/webstore/detail/blocknative-gas-fee-estim/ablbagjepecncofimgjmdpnhnfjiecfm · May 2022 - July 2022

· Spearheaded the creation of a Chrome extension with cutting-edge ML-powered gas prediction algorithms. Rapidly amassed over 70K users and secured a commendable 4.6-star rating.

· Utilized the RXJS paradigm, ensuring memory-efficient, high-performance code, leading to seamless user experiences.

· Cultivated a feedback-driven development cycle, continually refining the product based on user feedback.

· Streamlined user interactions with features like authentication, real-time gas price alerts, and intuitive historical pricing visualizations.

Blocknative Python SDK

Blocknative · https://github.com//blocknative/python-sdk · July 2021 - July 2022

· Led the entire development lifecycle of the Blocknative Python SDK, providing a streamlined interface to the Blocknative API and allowing users to seamlessly connect to various blockchain networks.

· Designed an intuitive and user-friendly SDK, minimizing the barriers to accessing real-time blockchain data and offering a straightforward setup for Python developers.

· Prioritized user empowerment by delivering clear documentation and comprehensive usage examples, ensuring users can effectively leverage the SDK's capabilities.

Web3data.js Javascript API

Amberdata · https://github.com/web3data/web3data-js · September 2018 - December 2020

· Spearheaded the entire development process of a comprehensive Javascript wrapper for the Amberdata.io REST API, facilitating effortless integration and interaction with blockchain data.

· Crafted a user-friendly and intuitive API, simplifying the complexities of blockchain data retrieval and ensuring a seamless user experience.

· Integrated advanced features such as Websockets for real-time data streaming, boosting the utility and responsiveness of the API.

· Ensured robustness by implementing a comprehensive testing suite, including live response tests, to guarantee consistent performance and reliability.

· Catered to the developer community with thorough documentation, a wide array of commands for different functionalities, and an inclusive contribution guide.

Embeddable NFTs

OpenSea · https://github.com/ProjectOpenSea/embeddable-nfts · January 2020 - March 2020

· Pioneered a dynamic and versatile tool allowing users to effortlessly embed OpenSea listings directly onto their websites, enhancing user interaction and NFT visibility.

· Designed and implemented the project harnessing Typescript and webcomponents to ensure a modular, efficient, and easily integrable solution.

· Integrated with the OpenSea API, enabling seamless and real-time NFT displays across diverse web platforms.

· Introduced flexible component inputs such as tokenAddress, tokenId, and network, among others, granting users the capability to customize and optimize their embeds according to distinct requirements.

· Facilitated an easy-to-use setup for developers, complemented by clear documentation, enhancing the developer experience and encouraging community contributions.

Etherscan Python API Wrapper

https://github.com/corpetty/py-etherscan-api · June 2017 - December 2017

· Streamlined and enhanced the functionality of HTTP response handling to mitigate potential issues related to empty responses.

· Lead the introduction of unit tests, enhancing code reliability and ensuring robustness.

· Innovated the way URLs are built by centralizing the functionality, promoting better code reuse and setting the foundation for easier feature additions in the future.

· Improved code quality by ensuring compliance with the flake8 linter, leading to a more maintainable and cleaner codebase.

EDUCATION

Mathematics & Computer Science – Conc. in Cyber Security
George Fox University · Newberg, Oregon · 2018
Dean's List (Spring 2017) | Richter Scholar Recipient | Resident Assistant

Mathematics
Corban University · Salem, Oregon · 2016
Dean's List Fall & Spring 2014

COURSEWORK

Database Systems
George Fox University · 2017 · Database Schema Design & Schema Normalization, Team Collaboration
· Designed a movie database schema and wrote scripts for schema normalization and data ingestion

Data Structures
George Fox University · 2017
· Implemented data structures such as linked & doubly linked lists, stacks & queues, binary tree, tries, etc.

Software Engineering
George Fox University · 2017 · Agile, Scrum, Software Design Specifcations
· Walked through the entire software development lifecycle using aigle and scrum methodologies

SKILLS

Programming Languages: Typescript/Javascript/HTML/CSS | Python | Rust | Golang | SQL | Solidity | Java | Assembly | C

Frameworks/Tooling: React + Next.JS | Svelte + Svelte Kit | Vue + Nuxt.js | GraphQL

Databases: Redis | PostgreSQL | FaunaDB | MongoDB

Knowledge: SDK & API Design, DevX & UX

DevOps: Git, Github Actions, Circle CI, Docker, AWS