

James Freeman

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Summary

I'm a software developer with a strong foundation in Python development, applications, automation, and blockchain technologies. I enjoy building useful tools that solve real-world problems and improve productivity. My recent projects include TradeLedger, Photo Library Organizer, and NFT Asset Toolbox, along with earlier freelance work on smart contracts, Web3 front ends, Telegram bots, and blockchain infrastructure. I'm currently pursuing a master's degree in computer science at the University of Colorado Boulder.

Experience

Freelance Software & Blockchain Developer 2021 – Present

- Built Python tools, automation scripts, Web3 front ends, Telegram bots, and blockchain utilities.
- Developed and deployed smart contracts for ERC-20 tokens, ERC-721 NFT collections, cross-chain bridges, and on-chain applications.
- Worked with GCP, Linux, Git, Python, JavaScript, Solidity, SQLite, MongoDB, and Web3 tooling.
- Tested, debugged, and maintained smart contracts, scripts, and applications with an emphasis on reliability and safety.

Ethereum Miner / Infrastructure Operator 2020 – 2022

- Built and maintained a personal 500MH/s Ethereum mining rig.
- Gained a deep understanding of Geth, blocks, gas, transactions, and network behavior.

Music Teacher / Performer 2007 – 2020

- Taught guitar, music theory, and performance to students of various age ranges from young children up to university-level instruction.
- Developed customized lesson plans, managed multiple projects, and mentored students individually.

Education

Master of Science in Computer Science (In Progress) - University of Colorado Boulder

Bachelor of Arts in Music - University of North Texas

Skills

Programming & Automation - Python, JavaScript, TypeScript, Solidity, SQL

Testing & Development - Linux, Windows, VS Code, Git, GitHub, pytest

Data Tools & Apps - PySide6, SQLite, Matplotlib, Pillow, JSON, CSV

Web & App Integration - REST APIs, Web3, HTML, CSS, React, Telegram bots

Blockchain & Smart Contracts - ERC-20, ERC-721, NFTs, tokens, bridges, Geth

Cloud & Infrastructure - GCP, MongoDB, local databases, file automation

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Selected Projects

TradeLedger

Python, PySide6, SQLite, Matplotlib, pytest, APIs

- Built a desktop application for tracking trading positions, wallet value, daily P/L, and historical account snapshots.
- Designed the app around read-only data access, local SQLite storage, cached history, position tables, charts, and fully customizable P/L views.
- Added automated tests for P/L calculations, metrics, position handling, caching, and UI-related logic.

Photo Library Organizer

Python, Desktop UI, File Automation, CSV, Image Processing

- Built a desktop utility for organizing and renaming photo libraries.
- Useful features like folder scanning, image preview, structured output folders, final CSV report generation, and dry-run mode for reviewing changes before moving files.
- Designed the tool to make repetitive file organization faster, safer, and easier to review.

NFT Asset Toolbox

Python, Pillow, JSON, Metadata Automation, NFT Assets

- Built a toolkit for generating, resizing, validating, and preparing NFT collection assets and metadata.
- Added support for layered image generation, trait metadata, collection validation, image format conversion, and IPFS metadata updates.
- Created tools for checking supply counts, metadata consistency, image paths, and collection output before final deployment.

Freelance Blockchain Work

Smart Contracts

Solidity, ERC-20, ERC-721, NFTs, Tokens

- Wrote, tested, and deployed ERC-20 token contracts and ERC-721 NFT contracts.
- Worked on minting logic, metadata, managed liquidity, and smart contract safety.

Web3 Front Ends

JavaScript, HTML, CSS, Web3

- Built blockchain-connected websites for NFT minting, cross-chain bridging and token swapping.
- Integrated wallet interactions, contract calls, and on-chain transactions.

Automation & Infrastructure

Python, Telegram Bots, GCP, Linux, MongoDB, Geth

- Built Telegram bots for wallet setup, transaction execution, monitoring, and blockchain-related workflows.
- Worked with GCP VMs, Linux servers, MongoDB databases, Geth nodes, and custom blockchain infrastructure.