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FULL-STACK BLOCKCHAIN DEVELOPER

PROFESSIONAL SUMMARY

Transitioned from theoretical particle physics to a seasoned professional poker player, owing success to self-built suite of tools for strategy analysis. Engagement with DeFi and algorithmic trading led to positions as a full-stack blockchain developer. Recently built and sold an AI app for chatting with private data, further enhancing strong technical acumen across diverse domains.

SKILLS

Tech: Python, TS, C++, Solidity, React, Docker, Hardhat, Foundry, Langchain, Google Cloud, building APIs, DS stack (pandas etc.) Fundamentals: theoretical physics, graduate level math, algorithms & data structures, stats, ML, game theory, cryptocurrency Miscellaneous: poker, analytic philosophy, scientific skepticism, teaching, 5 languages, writing & editing, accessibility issues/tools

WORK EXPERIENCE

Blockchain Developer at Peaze – Redwood City, CA

Aug 2023 – present

- Build smart contracts to enable gasless cross-chain transactions
- Build API to relay such transactions, write documentation

Blockchain Developer at Standard Creative – Redwood City, CA

Dec 2022 - Jul 2023

- Built smart contracts with extensive test suite, performed audits & gas optimizations, created documentation
- Built parts of frontend, integrated frontend with smart contracts and IPFS, created automated e2e frontend tests

DeFi and Algo Trader - Emeryville, CA

Aug 2021 – Dec 2022

- Built perpetual futures trading bot on Solana blockchain; traded manually and algorithmically across DeFi protocols
- Built Telegram bot with backend leveraging Python data science stack for time-series analysis, portfolio optimization

Professional Poker Player – Emeryville, CA

May 2007 - Oct 2021

- Beat mid & high stakes limit hold'em games with winrate 1.9BB/100 over last 1M hands on PokerStars and other sites
- Succeeded by building applications (Python/C++ see below) to help play, analyze strategies, alert to weaknesses

Co-founder of small software company Q-Wager – El Cerrito, CA

Jun 2006 – Aug 2009

Built C++ app to beat online casinos by optimally auto-playing blackjack and collecting bonuses, 300+ paying customers

PROJECTS

DocDocGo {Python: Langchain} – Al assistant for Carbon, Inc. to chat with company's private Confluence documentation

UI via Google Chat App, backend uses vector db of pre-ingested docs to allow LLM to answer questions about them

PROJECTS continued

Crypto Trader {Python} – trading bots for EVM-compatible blockchains and Solana

- Solana bot (a) runs market-making strategy for perp futures; (b) places +EV taker orders based on orderbook and oracle
- EVM bot queries liquidity pool smart contracts and executes on-chain swaps based on predefined triggers, sends alerts

Crypto Analyzer {Python: 4500 lines} – <u>Telegram bot</u> with a suite of tools for analyzing and monitoring crypto price data

- Fetches live & historical prices, calculates autocorrelation, volatility, trends, impermanent loss, makes graphical reports
- Each user can set one's own parameters and create alerts to monitor crypto positions; public vs advanced features

Poker Analyzer {Python: 6800 lines} – game analysis suite: advanced filters & stats, detects players' weaknesses during game

- During play parses game history, adds to custom-made database, updates all stats, reports deviations from reference
- Rich query language to filter player game data and 89GB of Nash equilibrium strategy, generates reports & quizzes
- Monte-Carlo sims of equilibrium & non-equilibrium play to calculate EVs and find exploitative strategy adjustments

VocabMeThis {Python: Flask} – mobile-friendly web app to test user's vocabulary and teach new words at auto-adjusting level

- 125000 words & definitions, with algorithm to rank by difficulty by constructing frequency dictionary from NLTK corpora
- Data cleaning algorithms to identify different forms of the same word, replace one-word definitions with proper ones

Game Manager {C++} – application to monitor & manage poker tables and play without needing mouse or keyboard

- Analyzes mic sound, classifies it (S vs SH vs AH etc.), translates into required action on poker table, adapts to noise
- Monitors poker tables for special events (opponent came, good seat freed up, etc.), alerts and performs needed action

ReasonMeThis {HTML, CSS, JavaScript} - philosophy, physics, and critical thinking blog at www.reasonmethis.com

- Over 30 articles on philosophy of language, anthropic reasoning, multiverse, entropy, consciousness, and other topics
- Custom HTML and CSS, responsive JavaScript animations of physics and math concepts

EDUCATION

Master of Arts in Physics – UC Berkeley

2006

- Conducted research in string theory as part of Ph.D. program, switched careers before finishing Ph.D.
- Completed coursework in quantum field theory, general relativity, string theory, differentiable manifolds, Lie groups
- Received Outstanding Graduate Student Instructor award for excellence in teaching

Bachelor of Arts in Physics – *UC Berkeley*

1999

■ Earned 2nd place in <u>BAUPC '99</u>, Harvard-run physics competition