

Deogratus Okori Ongom

COMPUTER SCIENTIST

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Email

Github

Portfolio

Kwetu Homes - Naalya, Kampala

PROFILE

Passionate and driven Computer Scientist with hands-on experience in building automated trading solutions and deep interest in blockchain technologies. Proficient in backend development, crypto protocols, and market-making strategies with the aim of contributing to innovative and impactful projects within the decentralized finance (DeFi) space. Seeking a challenging role where I can build robust systems, explore novel decentralized solutions and contribute towards the future of decentralized markets.

EDUCATION

Bachelor of Science in Computer Science | 2020-2023

Makerere University, Kampala

- Relevant Course Units: Object Oriented Programming with Java, Structured Programming with C, Data Structures and Algorithms, Calculus 1, Numerical Analysis 1, Data Warehousing and Business Intelligence, Data and Information Management 1, Artificial Intelligence, Computer Organization and Architecture

EXPERIENCE

Ufahamu Labs

Junior Software Developer | February 2024 - December 2024

- Wrote the main codebase for the connector.
- Used Drift's sdk to interact with the exchange on Solana.
- Ensured the connector adhered to Hummingbot's Gateway API specifications.
- Implemented functionality to handle wallet management, transaction signing and on-chain interactions.
- Implemented API endpoints for the connector.
- Used VS Code's inbuilt Typescript and Python debugging tools and techniques to trace issues in the code.
- Wrote unit tests for individual components of the connector such as order placement and cancellation.
- Employed testing frameworks e.g Pytest for Python and Jest for Typescript.
- Performed API tests using Postman to ensure successful pings.
- Performed manual testing of core components such as order placement and cancellation to validate functionality.
- Documented how to set up, configure, and use the connector.
- Ensured the connector could be built and used easily using Docker containers and prebuilt images.
- Implemented error-handling for blockchain interactions and edge cases like network failures and transaction timeouts.
- Logged all errors and warnings for effective debugging.
- Wrote and implemented strategies and scripts for trade execution that could be extended by other developers to fit custom needs.
- Added necessary HTTP requests on Hummingbot client to accomodate for Drift-specific requirements when running strategies e.g the ability to select custom subaccounts for trade execution.

Researcher and Database Manager (Part-time) | July 2021 - January 2022

- Actively tracked news, announcements, social media, and developer communities related to Solana from sources like X, Discord servers, CoinGecko, etc.
- Identified new and upcoming Solana projects, including those in development, beta or launching soon.
- Collected data on each project including: Basic information, tokenomics, technology e.g programming languages, funding, roadmap and milestones among others.
- Established clear categories and tags for the projects to ensure a standard level of data consistency.
- Populated the database with collected information.
- Ensured the accuracy and reliability of collected data by cross-referencing multiple sources.
- Compared projects against similar successful/less successful ones on metrics such as underlying technologies like programming languages used, security audit reports, features offered, level of user engagement, etc.
- Identified similar projects on Solana with those on other chains to understand how they[on Solana] fit with the broader market.
- Regularly updated the database with the latest information on existing projects.
- Corrected errors, inconsistencies and outdated information.
- Utilized Notion's tools to create and customize different views e.g tables, to present data effectively.

Internship at the Computer Science Department of Vellore Institute of Technology(VIT)

Undergraduate Research Assistant and Data Analyst | June 2023 - August 2023

- Researched existing time-series forecasting models especially N-BEATS.
- Gathered datasets with historical rice yield data for India.
- Identified and collected data on key factors influencing rice yield e.g rainfall, pesticides use, temperature and humidity.
- Defined the scope of the forecasting i.e long-term.
- Cleaned the data by handling missing values, outliers and inconsistencies in some datasets using Pandas in Python.
- Normalized the data for modelling.
- Identified relationships between rice yield and identified key factors e.g rainfall.
- Analyzed forecast errors to identify patterns and biases.
- Implemented the N-BEATS model using the Darts library in Python, configuring hyperparameters such as input/output sequence lengths and the number of stacks and blocks.
- Prepared time-series data for modeling by creating sliding windows and splitting it into training, validation, and test sets.
- Trained and evaluated the model using metrics like MAE, RMSE, and MAPE, achieving accurate long-term forecasts.
- Visualized the results of the model on graphs using Matplotlib in Python.

PROJECTS

Turbos CLMM Pool Bot

Personal, 2025

- Built a bot to provide and remove liquidity in Turbos CLMMs using its Typescript SDK
 - Implemented statefulness to ensure the bot can always pick up from where it left off in case of any failure
 - Used sui GraphQL to aid in efficiently monitoring LP position using position nfts
 - Used pyth to fetch real-time and high-frequency price feeds for the most accurate token prices when performing calculations
 - Integrated 7k aggregator to allow for fluid swaps when necessary, also using its SDK
 - Gracefully handled errors like insufficient balance, insufficient gas, stale liquidity inputs etc to ensure smooth running of the bot
 - Implemented detailed logging in log files to trace any bugs or fix errors when necessary
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- Implemented performance logging to monitor the bot performance over time
 - Created a docker image to make the bot portable and also be able to easily run multiple instances with different configurations for different pools using docker-compose

Hummingbot Gateway Drift Connector | [LINK](#)

Ufahamu Labs, 2024

- Built a Hummingbot Gateway connector using Typescript with backend logic to interact with Drift exchange
- Conducted unit tests on Gateway's backend functionality using Jest framework and API tests using Postman
- Implemented strategies using Python on the Hummingbot client, that communicated to the Gateway API endpoints
- Conducted unit tests on the strategies and scripts using Pytest
- Added necessary HTTP requests to handle Drift-specific requirements for better functionality
- Packaged the software for easy deployment across any device using Docker

Unicart | [LINK](#)

Computer Science Project, 2023

- Spearheaded the development of a web app aimed at bridging the information gap between consumers and the gadgets market in Uganda.
- Researched different consumer trends and factors considered when purchasing gadgets, specifically phones, in Kampala, Uganda
- Data on phone models and specifications from Jumia and Jiji was collected using Selenium in Python for web scraping, managed and stored using MongoDB
- Deployed a Flask API to serve this data, hosted on Heroku for scalability and accessibility
- Built the frontend using Javascript and Bootstrap framework

SKILLS

Languages

Python, Typescript, Java, C, JavaScript, Dart

Technologies/Frameworks

Jest, Pytest, Pandas, NumPy, Git, Flask, Selenium, Postman, Node.js, MongoDB, Heroku, Bootstrap, Matplotlib, Docker
