Yaacob Abdullah

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EDUCATION

CUNY Queens College   **New York, NY**
Bachelor of Science in Computer Science   *Expected December 2025*
Relevant Courses: Data Structures and Algorithms, Object Oriented Programming, Web and Internet Technologies

TECHNICAL EXPERIENCE

Truebird   **New York, NY**
Software Engineer Intern - *(Node-RED, JavaScript, SQLite, React, Node.js, XState, MQTT)*   May 2024 - August 2024
- Led development of a business intelligence dashboard by engineering **JavaScript** functions for processing historical transaction data, enabling precise tracking and visualization of customer activity, engagement, and habits.
- Utilized **Node-RED** and the **MQTT** protocol to construct dynamic charts, tables, and summaries, allowing upper management to view internal data with a clear and intuitive dashboard interface, improving operational insights.
- Crafted and optimized SQL queries to manage large datasets within **SQLite**, improving data access processing.
- Engineered frontend animations and implemented backend API's, using **React**, **Node.js** and **XState,** filling team gaps and doubled deployment rate.

Open Avenues   **New York, NY**
Software Engineer Intern - *QuickNode (Solidity, Node.js, ChainLink VRF, Chai, Hardhat)*   February 2024 - May 2024
- Spearheaded the development of a decentralized finance platform, utilizing **Solidity** smart contracts and **JavaScript** to enable secure, scalable, and high-performance blockchain transactions.
- Integrated **Ethereum Nodes** for scalable blockchain data retrieval, to facilitate real-time data interaction and smart contract deployment.
- Leveraged **ChainLink VRF** and the **SHA-256** hash to ensure random winner selection and data integrity, to facilitate secure Ether transactions and support commitment schemes.
- Authored unit tests using **Chai** assertions and the **HardHat** framework for blockchain environment simulation.

CUNY Tech Prep   **New York, NY**
Data Science Fellow   August 2024 – Present
- Selected as one of **100** students from **600+** applicants for a data science fellowship, collaborating with peers from 11 senior colleges to create technical projects using Python, Jupyter Notebook, Scikit-learn, Pandas and Numpy.
- Developed and deployed **predictive ML models** while mastering exploratory data analysis, feature engineering, statistical modeling, and machine learning techniques.

PROJECTS

FirstAidAI - *(Streamlit, LangChain, Gemini API, MongoDB Atlas, Hugging Face)*   **May 2024**
- Created an AI-powered medical assistant using **Streamlit** and **LangChain**, leveraging **Hugging Face** Transformers to classify wounds and detect medical equipment with 95% prediction accuracy.
- Engineered a Retrieval-Augmented Generation (RAG) pipeline with **Gemini API** and **MongoDB Atlas**, retrieving relevant medical advice.
- Designed and deployed a fully interactive chat-based user interface using Streamlit, integrating persistent chat history and real-time feedback loops.

Read Me a Story - *(OAuth 2.0, Node.js, Anthropic AI API, Google Text to Speech API)*   **May 2024**
- Developed at Node.js server to create a web application that generates AI-driven bedtime stories from user prompts and reads them to the user using Google Cloud Text-to-Speech API and Anthropic AI API.
- Implemented **JWT** based authentication and **OAuth 2.0** for secure access to Google Cloud services, ensuring data integrity and security in API communications.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, HTML/CSS, Python, Java, C++, SQL, Solidity
Frameworks and Libraries: React, Node.js, XState, MQTT, Express.js, Tailwind.css, Next.js, Pandas, Numpy, Scikit-learn
Developer Tools: Git, VS Code, Visual Studio, Eclipse, Remix, Postman, Node-Red, Jupyter Notebooks, Docker