JEFFREY ADU

FULLSTACK DEVELOPER

CONTACT INFO

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TECHNICAL SKILLS

Web Development: RESTAPIs
HTML5
CSS3
AJAX

Frameworks/Libraries: React
React Native
Node/Express
Fast API
Crew AI

Programming languages: Python
Java
Javascript
Typescript

Databases: PostgreSQL
MongoDB

Software/Tools: Git
GitHub
PostMan
Render
Pinecone
Supabase

Other: Agile Development
Object Oriented Design

EDUCATION

Computer Programmer
Algonquin College
2024 - 2025

CAREER OBJECTIVE

Passionate and self-taught Full-Stack Developer with hands-on experience in building AI-powered applications and real-time systems. Skilled in TypeScript, React, Node.js, and FastAPI, with a strong foundation in API development, data handling, and user-centered design. Eager to contribute to forward-thinking teams developing intelligent, scalable, and impactful software solutions.

TECHNICAL EXPERIENCE

Software Developer

Algonquin College | Cheetah Networks
January 2025 - August 2025

- **Problem Addressed:** Enhance the DriveMate Android application to leverage Cheetah Networks' proprietary SDK for LTE/5G network measurements, enabling reliable outdoor and indoor testing without specialized hardware.
- **Development**: Collaborated on implementing Master–Slave device coordination in Java to collect real-time metrics (RSRP, RSRQ, RSSI, SINR, latency) at predefined Points of Interest (POIs). Added support for GPS-based outdoor positioning and indoor floor plan–based testing.
- **Challenge**: Maintain synchronization and accuracy between multiple Android devices during active tests while managing role changes, connection handoffs, and temporary disconnections.
- **Solution**: Designed and implemented Java logic to process SDK callbacks, update the UI in real time via OpenStreetMap, and manage device state transitions within an MVVM structure. Built automated reconnection and test recovery features to ensure test continuity.

Founder & Lead Developer

Genertiaa – QuizMakerAI
July 2024 - current

- **Problem Addressed:** Educators spend significant time creating quizzes from course material, leading to inconsistent quality and limited personalization.
- **Development:** Building an AI-powered quiz platform with FastAPI, OpenAI API, CrewAI, Celery, Redis, and Supabase to automate quiz generation, grading, and personalized follow-up questions.
- **Team Challenge:** During the ingestion phase, processing large lecture files in real time caused API delays and blocked other requests, making the system unresponsive under concurrent use.
- **Solution:** Integrated Celery for asynchronous background task execution and Redis as a message broker to offload heavy ingestion jobs from the main API thread. This allows the system to process large documents without slowing down user interactions.

Core Courses: System Analysis and Design
Mobile Programming
Network Programming
Java
Object Oriented Design

BENG
Petroleum Engineering
University of Portsmouth
2018 - 2021

REFERENCES

Jason Mombourquette

Director General at RCMP | Digital Solutions Delivery

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Software Developer

Genertiaa - The Thinker

Febuary 2025 - current

- **Problem Addressed:** People often forget key details from important conversations, lectures, or meetings, making it difficult to reflect, clarify, and make decisions later.
- **Development:** Building a mobile app in React Native that records conversations in the background, stores them locally, and later allows users to engage in deep, context-aware conversations with an AI assistant. The backend is planned with FastAPI, OpenAI API, CrewAI, and a vector database for contextual retrieval.
- **Challenge:** Encountered state management complexity in the frontend when using Zustand for real-time recording state updates, alongside recurring React Native dependency and compatibility issues.
- **Solution:** Refactoring the state management structure for better separation of concerns and simplifying store logic. Resolving dependency issues by upgrading key libraries, aligning versions, and replacing unstable packages with more actively maintained alternatives.