Henry Agyare Asante

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Education

Grambling State University (GSU) **Aug. 2024 – May 2028**
Bachelor of Science in Computer Science *Grambling, Louisiana*
Relevant Coursework: Data Structures and Algorithms, Discrete Structures, Calculus, Data Analytics, Statistics

Skills: Python, JavaScript, React.js, Node.js, SQL, Git, Java, Agile Methodologies, Linux, RESTful APIs, HTML/CSS, MongoDB, Docker, CI/CD, JUnit, OpenAI API, SBERT

Experience

Dell Technologies **May 2025 – August 2025**
Software Engineer Intern *Austin, Texas*
- Developed an AI-driven test case recommendation system that improved regression testing analysis speed by 40%, by extracting, transforming, and embedding Jira story data via REST APIs using Python and SBERT.
- Reduced test mapping errors by 60% by replacing static Jira–qTest associations with a vector similarity engine, enabling smarter test selection through semantic matching of embedded story descriptions.
- Integrated Jira, qTest, and LLM-based models into a modular backend service, accelerating internal test cycles by 30%, and deployed a working prototype in collaboration with QA and DevOps teams for live evaluation and feedback.

AmaliTech NSP Training **May 2024 – August 2024**
Software Developer Trainee *Remote*
- Built a responsive, quiz app using React.js and JavaScript, allowing users to take quizzes, track scores in real time, and review detailed results, enhancing user engagement through dynamic state management and component-based design.
- Implemented a RESTful API with Node.js and Express to handle quiz data, user authentication, and score tracking, ensuring secure and efficient data management with JWT-based authentication and MongoDB for persistent storage.

KNUST Electrical Engineering Department **August 2023 – November 2023**
Full Stack Engineering Intern *Kumasi, Ghana*
- Developed a cross-platform circuit simulation tool with Vue.js, Electron, and Python, incorporating an AI-driven feedback system that served over 2,000 academic users.
- Reduced simulation latency by 35% by optimizing simulation workflows, implementing CI/CD pipelines, and designing a scalable database schema to support real-time analysis of analog, digital, and logic gate circuits

Agisam Academy **Sep 2021 – July 2023**
IT Support Specialist & Administrative Assistant *Accra, Ghana*
- Built a custom desktop automation suite using pandas, openpyxl, and SQL, streamlining student records, fee tracking, and classroom analytics; reduced data processing time by 40% and deployed tools still used daily across departments.
- Improved org infrastructure uptime by 60% by configuring and maintaining routers, switches, and Windows workstations; provided Tier 1–2 support for Wi-Fi and OS reimaging using standard diagnostic tools and command-line utilities.
- Optimized scheduling and internal communication workflows by integrating Google Workspace APIs, enabling auto-generated calendars, shared reports, and email alerts that reduced scheduling conflicts and manual follow-up effort.

Projects

StrokeSync - Remote Stroke Consultation Platform | *Python, Flask, SQL, JavaScript, HTML/CSS* **April 2025**
- Deployed a web platform using Flask, SQL, and JS to enable stroke units transmit patient vitals to remote neurologists.
- Reduced manual coordination efforts by 70% by automating NIHSS scoring and consultation alerts.
- Designed a responsive and accessibility-focused UI for field technicians and implemented a secure SQL-backed data layer to support longitudinal patient records, real-time updates, and role-based data access.

VoTran | *Hackathon Project (5-hour build)* | *React.js, HTML, CSS, OpenAI Whisper* **September 2024**
- Led frontend development in a team of 5 to build VoTran, a real-time language learning app featuring voice-to-text transcription, multi-language translation, and audio playback, powered by OpenAI's GPT API.
- Built an intuitive UI in React.js, using modular components, React hooks, and efficient state management.

BrillaAI – STEM Question Synthesis Platform | *Python, LoRA, LLaMA-3 8B, Unsloth, SQL, pandas* **April 2024**
- Generated 15,600+ high-quality STEM question-answer pairs by fine-tuning the LLaMA-3 8B model using LoRA adapters and 4-bit quantization via Unsloth, improving memory efficiency by 25% on a Tesla T4 GPU.
- Reduced training time by 2x through optimized model configuration using gradient checkpointing, 8-bit optimizers, and custom prompts with instruction-tuned formatting; improved token generation reliability for long-context tasks.
- Cleaned, formatted, and stored structured QA data using pandas and SQL, ensuring reproducibility, minimizing formatting drift, and enabling scalable access for downstream evaluation and inference deployment.