ABEL ADUGNA

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EDUCATION

Yale University   **August 2023 - May 2027**

B.S. in Computer Science

   Relevant coursework: Algorithms, Game Theory, Data structures, Discrete Mathematics, Systems Programming, Microeconomics, Multivariable Calculus, Statistics and Data Science, Probability, Software Engineering

Saint Joseph High School   **September 2017 - July 2023**

High School Diploma   **GPA 4.0/4.0 Weighted**

- Achieved a top **0.01%** ranking in the national secondary school leaving examination, demonstrating exceptional academic performance.

SKILLS

- Python, C, Java, Apps Script, PySpark, C++, Assembly, HTML, CSS, MySQL, R
- AWS Elastic map reduce, AWS S3, Amazon DynamoDB, Git, Spring boot, Mongo DB, Microsoft Office

EXPERIENCE

Amazon Web Services: *Software Dev Engineer intern*   **May 2025 - August 2025**

- Designed and implemented a distributed data processing system using PySpark on AWS elastic map reduce, organizing and validating 50+ PB of AWS cloud storage backup data in under 5 hours
- Improved backup integrity and reduced storage costs by cross-checking S3 backups with DynamoDB to identify and clean up unreferenced files.
- Optimized distributed workloads to cut processing costs from millions per run to a few thousand dollars while sustaining performance at massive scale.
- Delivered production-grade code and collaborated with me team using PySpark, EMR, S3, EC2, DynamoDB, and Git.

iCog Acc: *Software Development Engineer intern*   **June 2024 - August 2024**

- Developed a robust automated report generator that reduced manual data management time by over 75**%** and improved process efficiency by utilizing complex Google Apps Script logic and advanced data analysis techniques.
- Collaborated on the development of a follow-up system for crowdsourcing project on low-resource Ethiopian languages and an online programming teaching platform, increasing accessibility to language resources and optimizing educational content delivery.

Chief Technology Officer - Yale African Symposium   **May 2025 - current**

- As Chief Technology Officer for the Yale African Innovation Symposium, led a full redesign of the event's website and mobile app, improving performance, accessibility, and user experience for hundreds of attendees across devices

PROJECTS

Yale African Innovation Symposium Website

- Built a Flask-based web platform with HTML/CSS/JS to host event details, speaker bios, and schedules for Yale's pan-African innovation symposium
- Developed a Progressive Web App (PWA) and companion mobile app to support cross-device access, offline usage, and real-time updates
- Delivered a fully branded, responsive experience used by attendees across web and mobile

Personalized Travel Destination Generator

- Developed a fully responsive web application that dynamically generates personalized travel destinations for tourists.
- Built advanced filtering systems leveraging user preferences, resulting in a 40% reduction in search times and delivering tailored location recommendations with 95% accuracy based on user feedback.
- Designed complex algorithms to efficiently process and analyze user inputs, successfully matching them with optimal tourist destinations from a database of over 10,000 locations, achieving a 93% user satisfaction rate. Integrated sophisticated features such as rating-based sorting and category-specific filtering.

Course Flow Management API

- Developed a RESTful API using Spring Boot for an online teaching platform, enabling efficient management and retrieval of topics and courses, supporting 100,000+ course entries, and facilitating seamless integration with front-end applications and third-party services.
- Incorporated advanced authentication, validation, and authorization protocols in the API, ensuring secure access and maintaining data integrity while managing 1,000+ user roles and permissions within the teaching platform.