Technical Projects & Systems Portfolio

Adwoa Boama Acheampong | Analyst & Executive Support

In Training: AI/ML Engineering

I bridge operational, executive, and technical teams, turning business needs and data into clear requirements, actionable insights, and scalable AI-enabled solutions.

Explore my operational systems, business analysis, independent analytics and unpublished research, alongside the ideas I am developing next.

Selected Skills & Training

My ongoing AI/ML studies build on DataCamp training in data engineering and AI engineering. These selected tools and topics support my analysis and technical learning.

Data & reporting: SQL; Python and Jupyter; NumPy; Matplotlib and Seaborn; Exploratory Data Analysis (EDA); Statistics and Probability with statsmodels

Systems & automation: Apache Airflow; ETL & ELT Pipelines

AI/ML learning: Hugging Face; Python, machine learning and optimisation; ML/MLOps foundations; freeCodeCamp Scientific Computing with Python - in progress

Project Index

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Adinkra Intelligence Systems	ACTIVE PROTOTYPE
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AGL ERP Systems

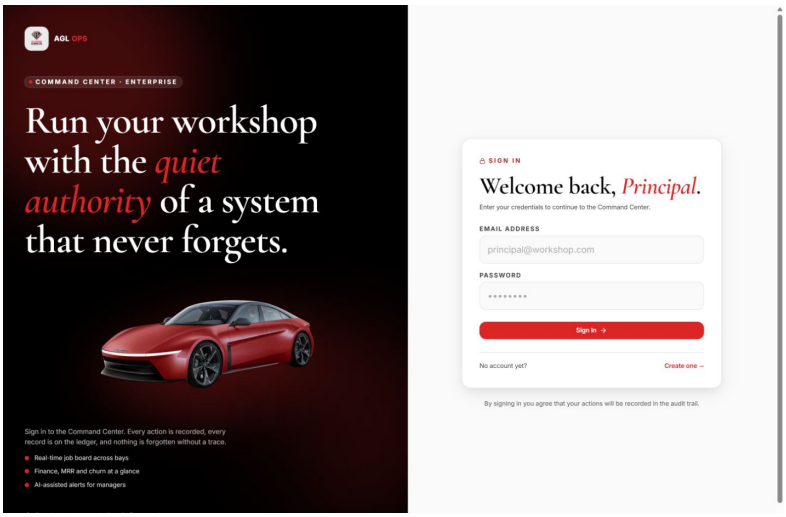
LIVE | Enterprise operations

A working ERP for Automobiles Ghana Ltd, connecting sales, workshop, HR, administration and finance workflows.

- Translated operational requirements into system specifications and coordinated implementation.
- Replaced disconnected paper and WhatsApp processes with centralized data capture and operational reporting.
- Supported staff adoption through training in data capture, reporting, teamwork and workplace ethics.
- Production-ready ERP delivered in under 32 weeks during the October 2024–July 2026 role.

Tools and methods: JavaScript | Google Sheets API | PWA | Kanban | QR staff access

Sign-in is required to access the ERP workflows. My project document includes dashboard examples. The campaign's GHS 1,200 to GHS 2,700 result dates to 2024.



AGL ERP public sign-in screen captured on 22 October 2026

Open AGL ERP

Blkk Star Legacy Organization

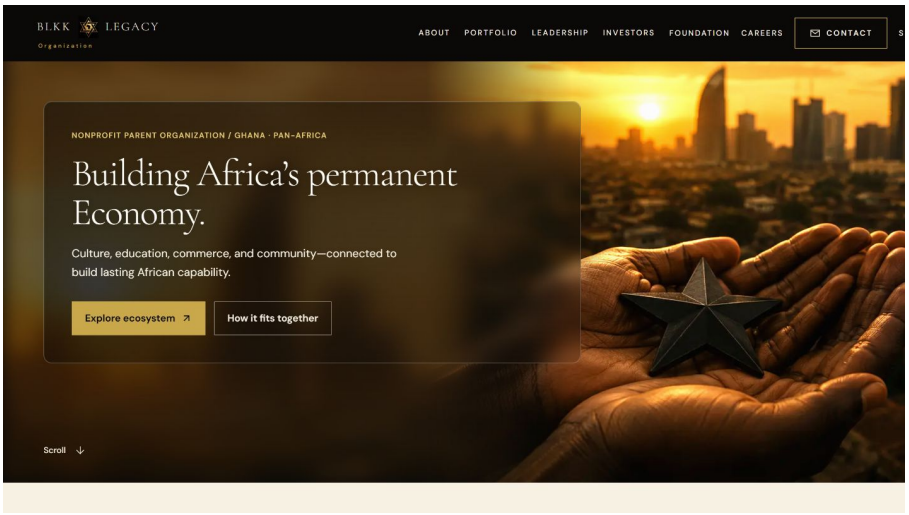
LIVE | Nonprofit and digital product development

The live parent website for a Ghanaian nonprofit connecting education, culture, commerce and community.

- Co-developed organizational architecture, requirements and implementation plans.
- Established shared brand and product frameworks and coordinated research, design and technical work.
- Tracks actions, dependencies and risks across commerce, analytics and food-system prototypes.

Tools and methods: Next.js / React | TypeScript | Requirements analysis | Operating model design

The parent website is live. Wider operational rollout and commercial validation remain in progress.



Blkk Star Legacy public organization landing page captured on 22 October 2026

Visit Blkk Star Legacy

Blkk Star Hub

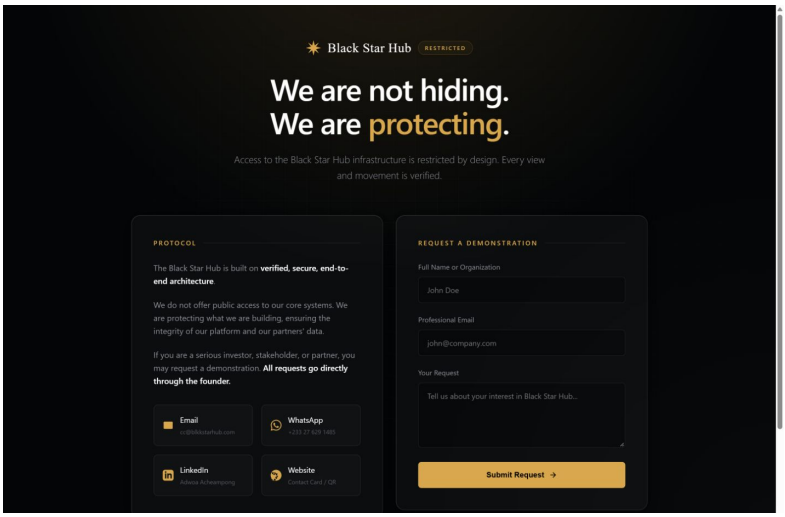
IN PROGRESS | Digital trade infrastructure

A platform in development for structured digital commerce and business operations across African MSMEs.

- Investigates verified merchant identity, product discovery, traceability and reusable business workflows.
- Sector prototypes explore automotive commerce, food systems and tenant analytics.
- Research and staged validation guide the platform architecture and rollout.

Tools and methods: React interfaces | API-first architecture (proposed) | PostgreSQL (architecture) | Search and tenant identity (design)

Core infrastructure is closed to public access to protect it; access is available through demonstration requests. The platform architecture is still being developed, with planned services and commercial validation remaining.



Blkk Star Hub restricted-access landing page captured on 22 October 2026

View current platform access

BLKK Autos

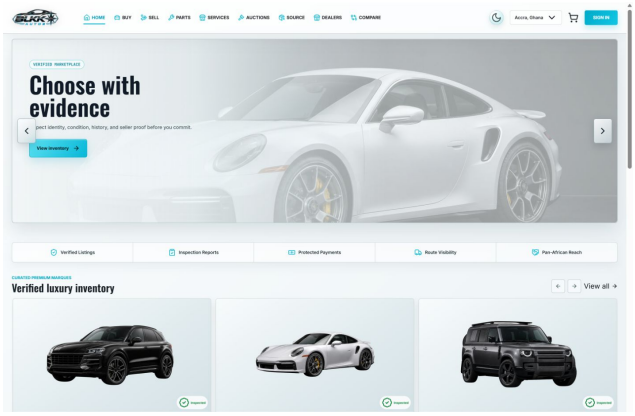
ACTIVE PROTOTYPE | Automotive commerce

A live web prototype exploring vehicle discovery and automotive merchant workflows.

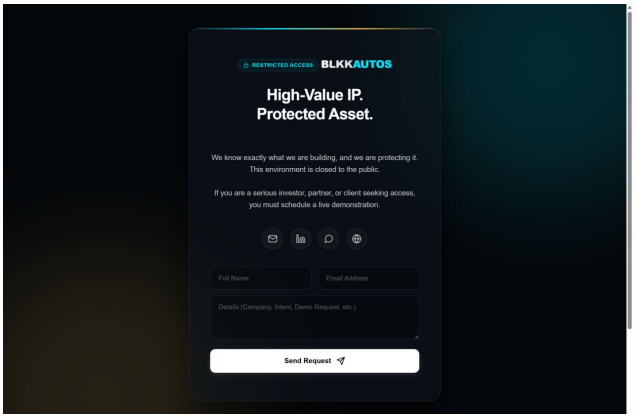
- Explores structured vehicle listings, inventory presentation and customer enquiries.
- Serves as a sector-specific validation route for the wider Blkk trade platform.
- Develops the web prototype ahead of production transactions and commercial rollout.

Tools and methods: React Native | Expo | Expo Router | Web build

The Pages frontend is open to explore. The older autos-app route redirects to the restricted Autos subdomain, where access is by scheduled live demonstration to protect intellectual property. These are separate access routes. Listings, badges and payment features remain part of the prototype; operational transactions and commercial rollout are still to be validated.



BLKK Autos public web prototype landing page captured on 22 October 2026



BLKK Autos custom-domain restriction notice: protected intellectual property, with access by scheduled demonstration

Open BLKK Autos prototype

View restricted Autos access

Farmers Hub

ACTIVE PROTOTYPE | Food systems and traceability

A pre-pilot food-system prototype connecting farmer and market workflows with accountable trade infrastructure.

- Explores agricultural discovery, traceability and coordination workflows.
- Supported by a project charter, investor brief and planning deck.
- Uses requirements and operating-model research to frame a potential pilot.

Tools and methods: Web prototype | Requirements and charter | Traceability model

Pre-pilot demonstration using sample product, supplier and performance data. Operating scale, order fulfilment and live transactions remain future pilot milestones.



Farmers Hub prototype with its demonstration-data banner

Explore Farmers Hub prototype

Adinkra Intelligence Systems

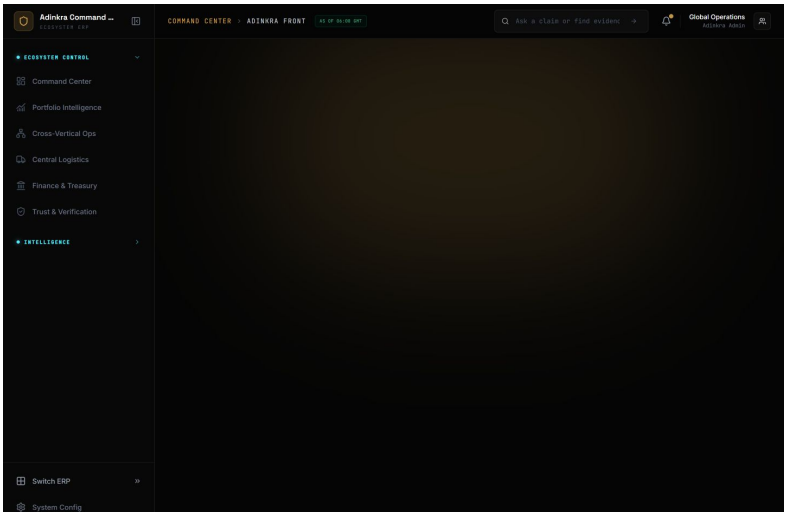
ACTIVE PROTOTYPE | Operational analytics

An analytics interface exploring tenant-level operational metrics, dashboards and drilldowns above business systems.

- Presents multi-vertical metrics and visual analysis for decision support.
- Explores group, entity and tenant drilldowns and structured data interpretation.
- Uses demonstration metrics to explore operational reporting.

Tools and methods: React | Vite | Tailwind CSS | Recharts | SheetJS

The public prototype capture shows the navigation shell. The analytics interface uses demonstration metrics; wider backend integration is in development.



Adinkra prototype navigation shell captured on 22 October 2026

Open Adinkra prototype

Review Adinkra source

MIRACLE

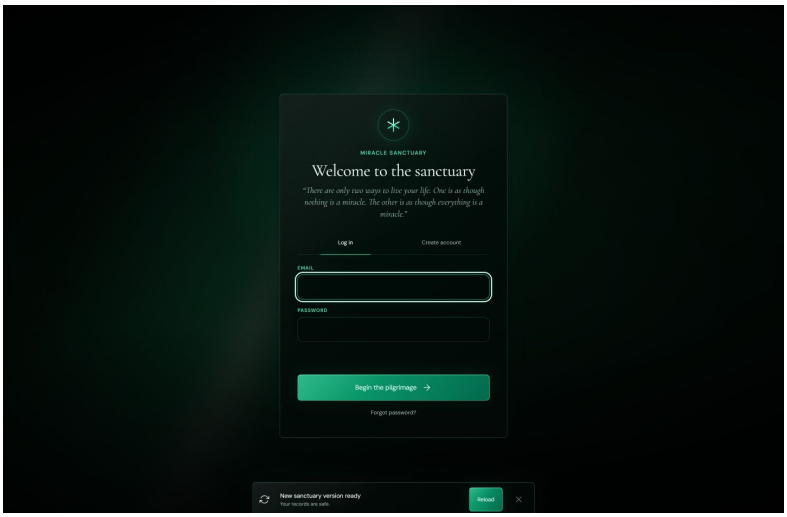
LIVE | Personal systems

A mobile-first personal planning PWA exploring faith, focus, habits and guided follow-through.

- Brings routines, personal goals and reflection into a responsive product experience.
- Uses progress and reward interactions as motivational product-design experiments.
- Extends practical workflow design into personal organization.

Tools and methods: Mobile-first web app | PWA | JavaScript

Sign-in is required to access the personal planning app. Its mobile-first design brings routines, reflection and progress into one experience.



MIRACLE Sanctuary sign-in interface captured on 22 October 2026

Open MIRACLE

Review MIRACLE source

HealthFirst Business Analyst Capstone

CAPSTONE | 6 local-complete, 3 partial | IBM learning capstone

Nine connected labs for a simulated hospital, from requirements and stakeholder planning through data analysis, an interactive Excel dashboard and risk mitigation.

- Seven separate Excel workbooks and PDF/DOCX report pairs cover requirements, stakeholders, scope, analysis, dashboards and risk.
- The analysis workbook has four native PivotTables, six slicers and four charts; the dashboard has four pivots, six slicers and two charts.
- A desktop Excel check changed the appointment KPI from 200 to 38 with the Cardiology slicer and restored it on reset. The dynamic risk matrix recalculated after an R01 change.
- A two-page index maps all nine labs, their evidence, relative file links and the three remaining platform/notation requirements.

Tools and methods: Microsoft Excel | PivotTables and slicers | Requirements traceability | Stakeholder and scope analysis | Editable SVG process models | Risk analysis | Python pandas and NumPy

Six labs are complete locally with review open. Local SVG diagrams do not fulfil the Lucidchart/Visio requirement; BPMN conformance is unvalidated, and the Cognos/Looker exercise is unfulfilled. Simulated data; no hospital sign-off, executed UAT, deployment or measured benefit.



HealthFirst Care | Business Analysis Capstone

IBM Business Analyst Project Portfolio Index

HealthFirst Care capstone delivery and verification map

Adwoa Boama Acheampong | IBM Business Analyst learning project

Portfolio status

The nine labs are separately identifiable artifacts built around one simulated HealthFirst Care case. Local report, workbook and diagram requirements were checked against their source instructions; three platform/notation requirements remain partial. No hospital approval, pilot execution or measured benefit is claimed.

Lab	Final artifacts	Status	Verification evidence
1 Requirements Traceability Matrix	RTM workbook · Findings PDF · BRD PDF	Local complete; review open	18 distinct IDs and UAT plans; exact data-source findings, denominators and inference limits
2 Stakeholder Analysis	Stakeholder matrix · Plan PDF · Matrix SVG	Local complete; review open	Ten supplied profiles, one inferred governance role, source appendix and engagement plan
3 Scope Plan and WBS	WBS workbook · Scope PDF · WBS SVG	Local complete; review open	Scope/change control; pilot root, seven branches and detailed work packages
4 As Is and To Be Models	Process PDF · As-Is SVG · To-Be SVG	Partial: tool requirement	Current/proposed flows exist; Lucidchart/Visio was not used as the lab requests
5 Process Maps and Swimlanes	Swimlane PDF · Appointment SVG · Discharge SVG	Partial: BPMN notation	Role lanes, decisions and rework exist; BPMN conformance has not been validated
6 Data Cleaning and Analysis	Analysis workbook · Analysis PDF	Local complete; review open	198 substantive feedback rows; peak-hour contrast; four native pivots, six slicers and charts
7 Dashboard	Dashboard workbook · Guide PDF · Dashboard PDF	Partial: platform requirement	Excel view and pivot filters tested; Cognos/Looker exercise not completed
8 Risk Register and SWOT	Risk workbook · Risk PDF	Local complete; review open	Ten legible risk IDs, 3×3 scores, controls, triggers and SWOT
9 Risk Matrix and Mitigation	Mitigation workbook · Mitigation PDF	Local complete; review open	Dynamic 3×3 matrix, owners, prevention, triggers and contingency plans

Page 1

Actual first page of the HealthFirst nine-lab project index, showing lab status and evidence

Explore HealthFirst case study and all files

Read HealthFirst project index

Lab Progress

Lab	Progress and next steps
1. Requirements and RTM	Local complete; review open
2. Stakeholder analysis	Local complete; review open
3. Scope and WBS	Local complete; review open
4. As-Is and To-Be models	Partial: editable SVG models; Lucidchart/Visio requirement unfulfilled
5. Process maps and swimlanes	Partial: role-lane diagrams; BPMN conformance unvalidated
6. Data cleaning and analysis	Local complete; review open
7. Dashboard	Partial: interactive Excel dashboard; Cognos/Looker exercise unfulfilled
8. Risk register and SWOT	Local complete; review open
9. Risk matrix and mitigation	Local complete; review open

I developed this simulated capstone using fictional data and profiles. Six labs are complete locally with review open; three retain the platform or notation requirements listed above. No hospital sign-off, executed UAT, deployment or measured benefit is claimed. The earlier 39-slide hospital case study uses a separate dataset.

HealthFirst Project Downloads

Explore my requirements, analysis, process models and risk planning for the simulated HealthFirst capstone through the reports and workbooks below.

M01L01 HealthFirst BRD (DOCX)

M01L01 HealthFirst BRD (PDF)

M01L01 Requirements Traceability Matrix (XLSX)

M01L01 RTM Findings (DOCX)

M01L01 RTM Findings (PDF)

M02L01 Stakeholder Analysis (DOCX)

M02L01 Stakeholder Analysis (PDF)

M02L01 Stakeholder Matrix (XLSX)

M02L02 Scope Management (DOCX)

M02L02 Scope Management (PDF)

M02L02 Work Breakdown Structure (XLSX)

M03L01 Process Model (DOCX)

M03L01 Process Model (PDF)

M03L02 Swimlane Diagrams (DOCX)

M03L02 Swimlane Diagrams (PDF)

M04L01 Data Analysis (DOCX)

M04L01 Data Analysis (PDF)

M04L01 Data Cleaning Manipulation Analysis (XLSX)

M04L02 Dashboard Evidence (DOCX)

M04L02 Dashboard Evidence (PDF)

M04L02 HealthFirst Dashboard (XLSX)

M05L01 Risk Register SWOT (DOCX)

M05L01 Risk Register SWOT (PDF)

M05L01 Risk Register SWOT (XLSX)

M05L02 Risk Matrix Mitigation (DOCX)

M05L02 Risk Matrix Mitigation (PDF)

M05L02 Risk Matrix Mitigation (XLSX)

Adwoa Acheampong IBM BA Project Index (PDF)

Adwoa Acheampong IBM BA Project Index (DOCX)

HealthFirst Excel Dashboard (PDF)

Earlier hospital case study with a separate dataset (PDF)

Tasty Bytes Recipe Site Traffic

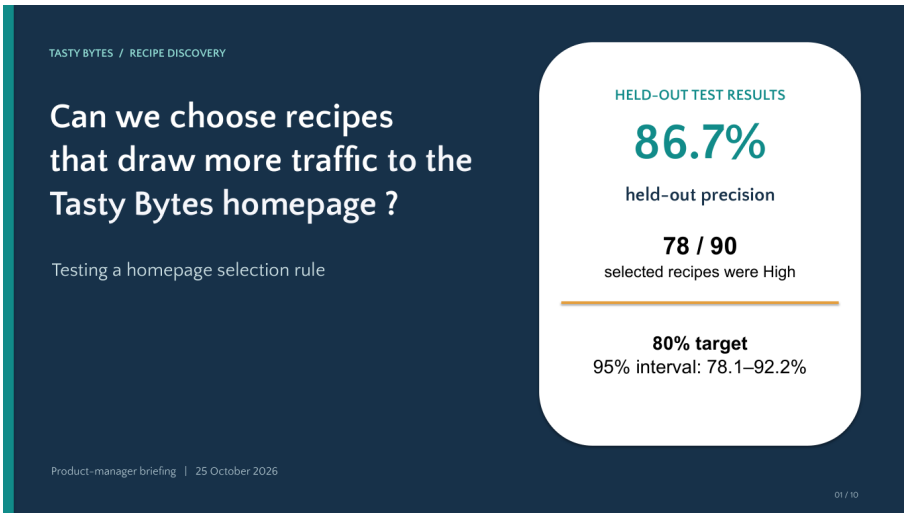
ANALYSIS COMPLETE | Pilot proposed | DataCamp data science project

A historical recipe-traffic classification analysis testing whether a product manager can select homepage recipes with at least 80% precision.

- Analysed 947 recipes, including missing nutrients, servings text and eleven observed categories; documented the provisional interpretation of 373 blank traffic labels.
- Separated training, validation and test data, and compared a select-all baseline, logistic regression and a random forest with validation-selected thresholds.
- On held-out data, the forest selected 90 of 190 recipes; 78 were High: 86.7% precision, 47.4% coverage and 67.8% recall. The 95% Wilson precision interval was 78.1–92.2%.
- Published the actual nine-page report, ten-slide presentation PDF, animated PPTX, current Google Slides and reproducible analysis files.

Tools and methods: Python | pandas | NumPy | scikit-learn | Matplotlib | DataCamp DataLab | Google Slides | PowerPoint

Historical model evaluation, not a deployed recommendation system or causal traffic/subscription lift. Blank-label meaning needs confirmation; shadow mode and a randomized pilot are proposed. The confidence interval extends below the 80% target.



Actual opening slide of the Tasty Bytes recipe traffic presentation

Explore Tasty Bytes case study and all files

Read actual DataLab report PDF

Download animated PowerPoint

Project Downloads

Actual DataLab report (PDF)

Presentation PDF (PDF)

Animated PowerPoint (PPTX)

Python analysis (PY)

Analysis notebook (IPYNB)

Model results (JSON)

Olist Marketing Funnel & E-Commerce Analysis

IN PROGRESS | Independent analytics project

Python analysis of lead conversion, commerce-linked sellers and seller-to-customer delivery corridors using public Olist data.

- Preserves one row per marketing lead by aggregating commerce records before joining seller data.
- Analysis results: 8,000 leads, 842 closed deals, 10.53% conversion, 380 commerce-linked deals and 45.13% commerce-link rate.
- Validates 97,811 eligible seller-order records across 412 state corridors; dashboard exports and Looker Studio publication remain pending.

Tools and methods: Python | pandas | Matplotlib | Jupyter | GitHub Codespaces

My independent, self-directed project draws on MIT OpenCourseWare materials.

Review Olist analysis and notebook

Unified Family Educational ERP

IN PROGRESS | Family learning systems

A family learning ecosystem in active development, exploring age-appropriate interfaces and AI-assisted educational workflows.

- Models different family roles and learning interfaces in a shared application.
- Explores learner progress, content and workflow coordination.
- Develops the application in the repository ahead of public production deployment.

Tools and methods: React | Vite | Tailwind CSS | TanStack Query | Recharts

Active development, with AI routing and integrations still planned.

Review Family Educational ERP repository

Process Modelling & Secure Workflow Design

COMPLETED CASE STUDY/LAB | Process analysis learning artifacts

Text-based Mermaid and BPMN process artifacts documenting business flows and secure workflow design.

- Documents flow sequence, decision points and responsibilities.
- Provides editable text diagrams for process discussion and refinement.
- Uses Mermaid and BPMN text sources to make workflow models easy to revise.

Tools and methods: Mermaid | BPMN | Process analysis

My process-modelling learning work uses editable text-based Mermaid and BPMN diagrams.

Read Mermaid process source

Read BPMN model source

Project Downloads

Secure authentication workflow (Mermaid TXT)

Customer onboarding model (BPMN XML in TXT)

Automotive Sales Analytics

COMPLETED CASE STUDY/LAB | Data analysis lab

My automotive sales-analysis exercise uses the CarSalesByModelEnd workbook.

- Explores model-level sales data and spreadsheet reporting.
- Demonstrates data summarization and analytic communication.
- Training data and findings are separate from Automobiles Ghana operational results.

Tools and methods: Excel | Sales analysis | Data visualization

Workbook-based learning lab. Platform-specific dashboard publication remains a separate step.

Download automotive sales workbook

Project Downloads

Model-level sales analysis workbook (XLSX)

Municipal Fleet Equipment Inventory Analysis

COMPLETED CASE STUDY/LAB | Spreadsheet data-quality lab

A completed inventory workbook exercise using Montgomery fleet equipment data.

- Works with structured equipment records and spreadsheet data quality.
- Supports inventory summarization and review.
- Brings the completed inventory analysis together in a final workbook.

Tools and methods: Excel | Data cleaning | Inventory analysis

Course learning lab using Montgomery fleet equipment data.

Download final inventory workbook

Project Downloads

Final municipal inventory workbook (XLSX)

Formalising Africa's Informal Economy

IN PROGRESS | Unpublished research working paper

A working paper examining accountable digital trade infrastructure and the Blkk Star Hub operating thesis.

- Studies formalization, trust, traceability and business records in informal commerce.
- Connects research questions to prototype and operating-model design.
- Develops the research as an unpublished working paper.

Tools and methods: Research synthesis | Business analysis | Operating model design

Unpublished, non-peer-reviewed working paper in development.

Read unpublished working paper

Project Downloads

Unpublished working paper (PDF)

Professional Portfolio

LIVE | Professional evidence and web publishing

I built this accessible site to bring together my analyst experience, projects, credentials and downloadable documents.

- Shares project progress, working examples and supporting documents.
- Connects resume, certification gallery and contact/QR hub.
- Uses crawlable static routes, responsive layouts and structured metadata.

Tools and methods: HTML | CSS | JavaScript | GitHub Pages

The repository is the maintained source of this website.



Adwoa Acheampong portfolio banner

Review portfolio source repository

Building AGL

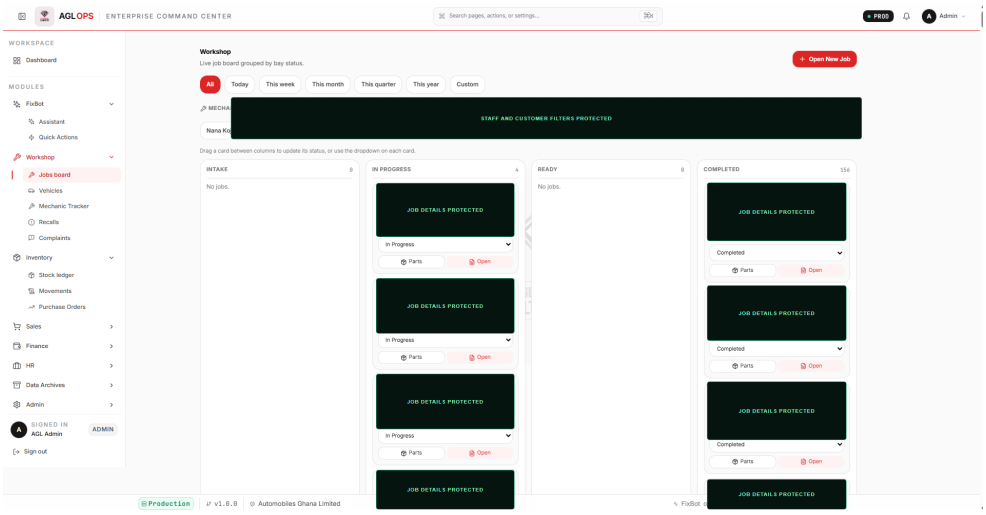
CONCEPT | AI-assisted diagnostic safety glasses

A Meta-glasses-style safety-goggle concept for workshop diagnostics and mechanic learning support.

- Proposed inputs include camera video, fault codes, diagnostic readings, service history and mechanic observations.
- A proposed reviewed learning loop records validated workshop outcomes and alternative repair methods.
- Mechanics retain final judgment; confidence, provenance and safety review remain part of the blueprint.

Tools and methods: Computer vision (proposed) | Diagnostic AI (proposed) | Wearable camera/display (concept)

Concept blueprint. The thumbnail shows the existing workshop workflow that informs the design; AR hardware and a diagnostic overlay remain conceptual.



AGL workshop workflow used as context for the diagnostic glasses concept

The Merchant Hub

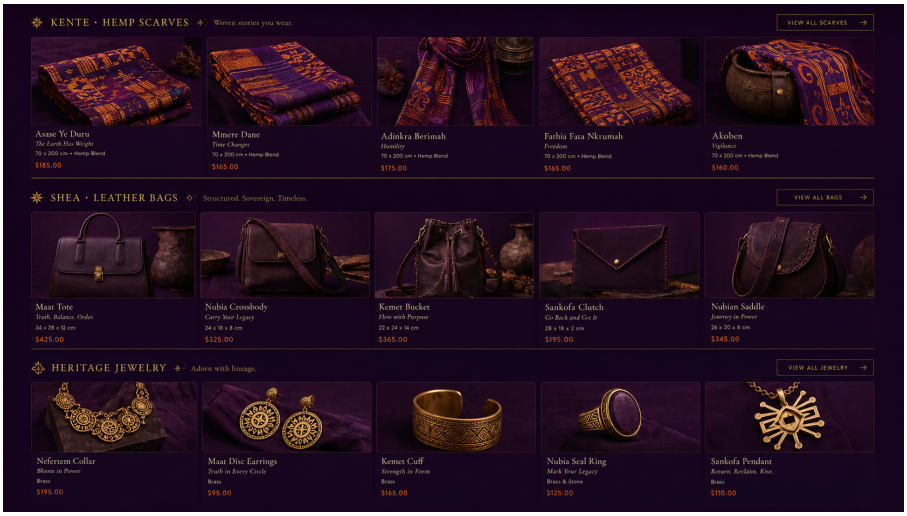
IN PROGRESS | Founder and SME ecosystem

A venture concept combining commerce support, founder training and shared operating services for African SMEs.

- Proposes digital operations, marketplace support, logistics coordination and founder training.
- Explores executive assistance and community commerce services.
- Researches community capital models, with operational and financial validation still ahead.

Tools and methods: Operating model design | Requirements planning

Venture development with a concept illustration. Marketplace operations and pooled-capital services are still proposed.



Merchant Hub commerce concept rendering, not a live product screenshot

Discuss the venture

Real Estate Management Hub

CONCEPT | Property operations

A broader property-operations concept covering professional hosting, staff training, guest coordination and owner reporting.

- Proposes property hosting and booking coordination.
- Explores staff training and guest travel support.
- Owner reporting would cover occupancy, maintenance and guest feedback.

Tools and methods: Service design | Requirements planning

Property-operations concept, with platform development and client rollout still ahead.

Discuss property operations

Blkk Label

CONCEPT | Brand and production venture

A proposed brand and production arm exploring culturally grounded products and skills-to-production pathways.

- Develops a brand thesis and proposed product/production model.
- Requires demand, quality, unit-economics and operating validation before scale.

Tools and methods: Brand systems | Operating model design

Concept imagery illustrates the proposed brand; manufacturing infrastructure remains to be developed.



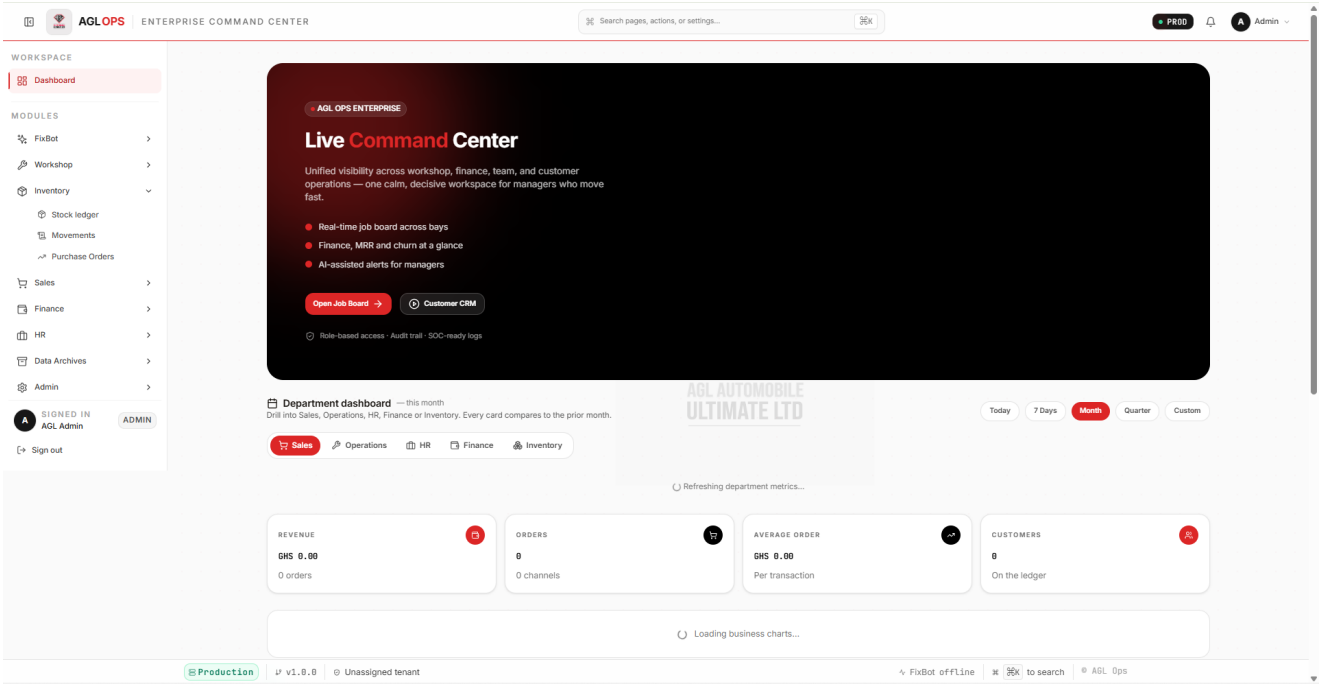
Blkk Label apparel concept rendering

Discuss Blkk Label

AGL ERP: Dashboard

Earlier dashboard view

This earlier dashboard view illustrates my AGL ERP work. The public site opens at sign-in; access to the internal workspace requires an authorised account.



Professional References

A remarkable professional with an extraordinary ability to transform complex operational challenges into streamlined, efficient systems. Her strategic thinking and execution are of the highest calibre.

Rtd. Major General Barry Tariye Ndiomu - Former Amnesty Administrator, Nigeria

Adwoa was a very disciplined minded lady and complained not. Easy at multi-tasking and implementing day to day administrative functions and front office care. Managed the skilled workers and communicated with our services providers. With direct reports to me and the Chairman. She is recommended for any Administrations and Executive Support role

Mr Hilarius McCash - Economic Advisor, Jamila Home/Decor

AGL and Stoicteam collaboration

Feedback summary recalled by Adwoa, not a direct quotation from either CEO.

Feedback on the AGL collaboration highlighted my ability to translate business vision into scope and requirements, and connect executive priorities with technical delivery for digitising sales and operations.