

# MAFABI HUSSEIN

## Backend-Focused Full Stack Software Engineer

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## PROFESSIONAL SUMMARY

Backend-focused Full Stack Software Engineer with hands-on experience designing, building and deploying web and mobile applications through freelance work and academic projects. Strong foundation in backend development, RESTful API design and relational database modeling using JavaScript, TypeScript, and Python. Comfortable working across the full development lifecycle with hands on experience from requirements gathering & clarification, system design to implementation, testing and deployment. Experienced with applied image recognition concepts, mobile performance constraints, and data-driven systems. Highly adaptable, self-driven and committed to continuous improvement as an engineer.

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## TECHNICAL SKILLS

### Backend Development

Node.js, NestJS, Express.js, FastAPI, Django, JavaScript, TypeScript, Python

- API development, request validation, authentication, authorization
- Modular backend structure and maintainable code practices

### Databases & APIs

PostgreSQL, Supabase, SQL, RESTful API design

- Relational database modeling and schema design
- Data integrity, query optimization basics, CRUD operations
- Performance optimization

### Frontend

React, Next.js, HTML, CSS

- Building responsive user interfaces and handling client-side state
- Integrating frontend applications with backend APIs whether third party or custom

### Tools & Engineering Practices

Git, GitHub, version control workflows, basic deployment practices

- Feature branching, issue tracking and collaborative development
- Introductory system design and backend architecture concepts

### Applied Image Recognition (Project-Based)

- Image annotation workflows and region-of-interest (ROI) processing

- Mobile image handling and performance-aware processing
  - Introductory on-device inference concepts and constraints
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## PROFESSIONAL EXPERIENCE

### **Freelance Software Developer**

*2022 – Present*

- Designed, developed, and maintained web and mobile applications for small businesses, academic use cases, and individual clients.
  - Built backend services using Node.js, NestJS, PostgreSQL, and Supabase, focusing on clean API structure and data consistency.
  - Designed RESTful APIs implementing authentication, role-based access control, and request validation.
  - Worked on full application flows including user onboarding, data persistence, and backend-driven business logic.
  - Collaborated closely with clients to gather requirements, clarify expectations, and iteratively deliver functional solutions.
  - Managed projects end-to-end, including basic system design, development, testing, deployment and post-delivery fixes.
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### **Data Annotator**

#### **Samasource Uganda Ltd – Gulu**

*July 2021 – November 2021*

- Annotated, reviewed, and cleaned datasets used for computer vision and machine learning models.
  - Followed structured annotation guidelines and quality assurance processes to maintain high data accuracy.
  - Worked within established data pipelines, gaining exposure to production-level AI workflows.
  - Developed attention to detail and consistency critical for data-driven systems.
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## PROJECTS

### **ObjectID – Android Image Identification Application**

- Developed an Android application that allows users to capture or upload images for object identification.
- Implemented region-of-interest (ROI) annotation to isolate specific objects within an image.

- Focused on efficient image handling and performance optimization for low-end mobile devices.
- Gained practical experience with mobile constraints, image processing workflows and API integration.

### **Oakley Store – Ecommerce Progressive Web Application (PWA)**

- Built a full-featured ecommerce platform with product catalog, shopping cart and checkout workflows.
- Implemented role-based access control supporting vendor and customer roles across separate interfaces.
- Integrated backend APIs with a relational database to manage products, orders, and user data.
- Focused on reliability, usability and maintainable application structure.

### **Visual AI – Image Recognition Backend System**

- Designed and implemented a backend API for image recognition using Mobile Net V3 TF-lite model as a personal project.
- Focused on efficient image handling, performance considerations, and offline-friendly concepts.
- Documented design decisions and released the project as open source to demonstrate learning progress.

### **Professional Websites**

- Designed and deployed responsive websites for businesses, organizations and personal brands.
- Applied frontend best practices including performance optimization, accessibility and SEO-friendly structure.
- Delivered complete solutions from layout design to deployment.

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## **EDUCATION**

### **Bachelor of Science in Computer Science**

Kampala International University

2022 – 2025

### **Higher Education Access Certificate (Mathematics & Chemistry)**

Gulu University

2020 – 2021

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## **CERTIFICATIONS**

- Certificate in Database Management Systems – Great Learning Academy (Online)

- Certificate in Data Science Foundations – Great Learning Academy (Online)
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## **SOFT SKILLS**

- Strong problem-solving and analytical thinking
  - Clear communication with both technical and non-technical stakeholders
  - Ownership, accountability and reliability in task execution
  - Adaptability and commitment to continuous learning
  - Teamwork and collaboration
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## **AVAILABILITY**

Open to freelance, contract and full-time software engineering opportunities.