

ANDRÉ MICHEL I. SARR

Dakar, Senegal · (221) 77-882-83-76 · sarrandremichel@gmail.com
<https://andresarr.is-a.dev/>

PROFILE SUMMARY

Engineer from École Supérieure Polytechnique de Dakar, Senegal specialized in App & Web Development and AI Integration. Passionate about building modern platforms and intelligent automation, I am actively working on several real-world projects combining full-stack development and AI model integration. My goal is to design efficient, reliable, and innovative solutions while continuously strengthening my technical skills through impactful projects.

EDUCATION

Ecole Supérieure Polytechnique, Dakar, Sénégal **December 2023 – July 2025**

Bachelor's degree in Engineering Technology: Major: Computer Science; 1st class grade GPA: 3.3/4.00

Coursework: Dynamic Web Development, Advanced Mobile Development, Advanced Object-Oriented Programming (Java), Systems & Network Programming, Introduction to Artificial Intelligence, Advanced Database Management Systems, English, Operations Research, Probability & Statistics, Algorithms & Data Structures, C Language, Advanced Operating Systems, Systems Administration, Software Engineering (UML), Data Management Systems, Software Development Process Engineering, Project Management, Semi-Structured Data, Artificial Intelligence & Expert Systems, Advanced Java, Human-Computer Interaction, Advanced Networking, Network Services, Software Quality Control & Maintenance, Software Architecture, .NET Technology & C#, Business Intelligence & Data Warehousing, Distributed Systems & Middleware, Network Administration & Supervision

Faculty of Science and Technology, CHEIKH ANTA DIOP UNIVERSITY

March 2021 – June 2023

Bachelor's in Physics and Chemistry ;

Coursework: Matter Structure & Single-Electron Systems, Experimental Chemistry, Chemical Thermodynamics, Chemical Equilibrium, Mechanics I & II, Electrostatics, Experimental Physics, Introduction to Real Numbers & Numerical Sequences, Local Study of Single-Variable Real Functions, Logic & Set Theory, Introduction to Algebraic Structures, Polyelectronic Systems & Chemical Bonding, Molecular Models, Simple Chemical Systems & Chemical Kinetics, Optics I & II, Circuit Theory, Magnetostatics, Differentiability & Applications, Integral Calculus & Introduction to Differential Equations, Vector Spaces & Linear Maps, Matrix Calculus & Determinants, Descriptive Organic Chemistry, Inorganic Coordination Chemistry, Physical Thermodynamics, Electromagnetism, Generalized Integrals & Series, Probability, Algorithms & Data Structures, Programming, Functional Organic Chemistry, Complex Chemical Systems, Special Relativity, Mathematics for Physics, Quantum Mechanics, Multivariable Functions, Multiple & Curvilinear Integrals, General Mechanics, English

WORK EXPERIENCE

Made in Senegal Center (MISEN) - Ministry of Commerce, Senegal

March 2026 - Present

Full Stack Developer

- Contributed to the development of **Koom Media Group**, a professional media website covering business news for MISEN's communications platform (koom-media-group.misen.sn).
- Designed and developed “**Rombale**”, an internal HR & payroll management system including:
 - A **mobile app** for employees to track attendance and appointment follow-up.
 - An **admin dashboard** for HR and Finance (DAF) teams to monitor working hours, attendance records, and automate monthly meal deduction calculations.
- Participated in the development of a **Card Digitalization System** to automate the production and issuance of entrepreneur cards and import/export cards, transitioning from a manual process to a secure digital workflow.

Ministry of Telecommunications, Communications & Digital Affairs - Senegal

July 2025 - February 2026

AI and Data Project Manager Assistant

- Led implementation and deployment of a chatbot for the “New Deal Technologique” website.
- Implemented a media monitoring tool for the communication unit.
- Created smart dashboards for follow-up of nationwide projects.
- Designed and developed a Document Management Platform (DocManagement) to centralize all institutional documents including TDRs, MOUs, Contracts, Mission records, and Partnership files — built solo using Next.js and PostgreSQL.
- Implemented advanced search and filtering functionality for fast document retrieval across large institutional archives.

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- Built a role-based access control system defining user permissions across different departments and document types.
- Integrated document upload and template-based document creation, enabling staff to generate standardized documents directly from the platform.
- Developed an automated notification system to alert relevant users on document updates, submissions, and approvals.

LIMBI – Laboratoire d'Imagerie Médicale et Bio-Informatique, ESP

June 2025 - October 2025

AI Engineer Intern

- Designed and developed a personalized AI chatbot assistant powered by a RAG system, leveraging users' medical records to deliver accurate and context-aware health responses.
- Integrated the chatbot into WhatsApp using Twilio, building a robust end-to-end workflow from user query to AI-generated medical response.
- Achieved a RAGAS evaluation score of 82% on the prototype, demonstrating strong retrieval accuracy and response relevance for a medical use case.
- Work validated with a final score of 17/20.

PROJECTS

Personalized AI Health Assistant for WhatsApp

Python/Django, React/Next.js, PostgreSQL, Celery, RAG Architecture

- WhatsApp-integrated AI assistant that analyzes a patient's medical history to provide personalized health insights, lifestyle guidance, and educational reminders.
- Built with a secure RAG architecture delivering contextual, easy-to-understand information directly through WhatsApp.

Link: [Video - Presentation](#)

Real-Time Gesture Recognition Application

Flask, YOLOv5, Flutter

- Application using YOLOv5 to recognize sign language and perform bidirectional transcription into text or speech synthesis - both from gestures and spoken language.
- Model served via Flask, integrated into a Flutter app, providing a smooth and accessible real-time experience.

Links: [Google Colab](#) · [GitHub](#)

Waxma - Chatbot for Accessible Statistical Data

Next.js, Django, Google Earth Engine, OpenStreetMap, OpenData Senegal

- Chatbot capable of providing satellite image outputs, explanatory texts, tables, and charts, making demographic, socio-economic, and geospatial data from Senegal more accessible.
- Designed to be inclusive by offering voice-based interactions.

Links: [Presentation](#) · [YouTube](#) · [GitHub](#)

Maison des Grandes Dames - E-Commerce Platform

Next.js, Wave Business API

- Designed and developed a fully functional e-commerce platform for a fashion brand, handling product catalogue, cart management, and order processing.
- Integrated Wave Business API as the payment gateway, enabling seamless and secure mobile money transactions for customers across Senegal.
- Built with Next.js for fast server-side rendering and deployed on Vercel for optimal performance.

Link: <https://maisondesgrandesdames.vercel.app/>

VFX Portfolio - Personal Portfolio Website

Vite.js,

- Designed and developed a personal portfolio website for a VFX profile showcasing projects, skills, and professional background.
- Built with a modern UI/UX approach, deployed on Vercel for fast and reliable access.

Link: <https://karba-vfx.vercel.app/>

CERTIFICATIONS

Google Cybersecurity Certification - Coursera / Google

Acquisition of key cybersecurity skills including risk analysis, incident management, and system security. Proficient in Wireshark and Linux, with knowledge of cryptography, network security, threat detection, and robust defenses.

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<https://www.coursera.org/account/accomplishments/specialization/certificate/MXAK4ER7VBJV>

Python Basics - *HackerRank*

Validation of essential Python skills: data manipulation, control structures, loops, and function management. Expertise in problem-solving and writing efficient, optimized code.

<https://www.hackerrank.com/certificates/70e2f1c5941d>

Pre Security Learning Path - *TryHackMe*

Acquisition of foundational cybersecurity knowledge: networks, cryptography, Linux, and vulnerability management through interactive exercises and realistic scenarios.

https://drive.google.com/file/d/1BRiYM-2v3psFuEhEBn-6j9c2QxJIFTcp/view?usp=drive_link

Python Essentials 2 - *Cisco Networking Academy*

Advanced Python concepts: object-oriented programming, exception handling, and complex data structures. Skills validated through practical application development.

https://www.credly.com/badges/1b4f5194-d93f-41aa-89fd-cb38ec1dba15/linked_in_profile

Microsoft Tech@Work - *Microsoft / IOE / Synapse*

Training in digital and entrepreneurial skills for the modern workplace. Emphasis on essential technological tools, collaborative practices, and innovation for professional integration.

<https://drive.google.com/file/d/1lkr0y28w5LCpKLX-wNuo6C8WTdLshNxv/view>

Network Technician Career Path - *Cisco Networking Academy*

Deep dive into networking fundamentals, including network protocols, infrastructure configuration, troubleshooting, and network security implementation.

https://www.credly.com/badges/d83635e2-12d0-4825-920e-0419a959b9f3/public_url

TECHNICAL & PERSONAL SKILLS

Technical: Python, Django, React, Next.js, Flutter, Flask, PostgreSQL, Celery, YOLOv5, RAG Architecture, AI Model Integration, REST APIs, Java, C, C#, .NET, Git/GitHub

Cybersecurity: Fundamentals of ethical hacking, Wireshark, Linux, network security, cryptography, vulnerability management

Personal: Teamwork and autonomous task management, Report writing, Problem-solving and innovation, Entrepreneurial mindset

LANGUAGES

English: Intermediate - B2

French: Advanced - C2

Wolof: Native

Serer: Native

LINKS & REFERENCES

Portfolio: <https://andresarr.is-a.dev/>

GitHub: <https://github.com/Anonymous1223334444>

Bachelor Thesis Dissertation: https://drive.google.com/file/d/13hw0o22h8yVlkH9Yt2Gnvg_i-enSCMyA/view?usp=sharing

Scientific Article: https://drive.google.com/file/d/1nJ_PNuH0IVLKma3eujOiGnqnJbOfIwB5/view

Google Cybersecurity Certificate:

<https://www.coursera.org/account/accomplishments/specialization/certificate/MXAK4ER7VBJV>

Python Basics - HackerRank: <https://www.hackerrank.com/certificates/70e2f1c5941d>