



Contact

Phone

+212607722081

Email

ayoub.sbai@centrale-casablanca.ma

ayoubgameranger@gmail.com

Github

<https://github.com/ErgodicEntropy/>

LinkedIn

<https://www.linkedin.com/in/aysb09/>

Education

2019-2021

**Classe Préparatoire aux
Grandes Ecoles (CPGE)**
CPGE Mohammed VI

2022-2025

Ingénieur Systèmes Complexes
Ecole Centrale Casablanca

Expertise

- System Dynamics Design/Analysis
- Machine Learning/AI
- Meta-tutoring
- Operations Research
- Software Product Management
- Data Analysis

Language

English: TOEIC (895/990)

French: DALF C1

Ayoub Sbai

Data Analyst-Systems Engineer

Results-driven engineering student focused on designing reliable data-driven systems that maximize customer satisfaction and drive acquisition through innovative, user-centric solutions.

Technical Skills: PHP, Java, Python, SQL, Node.js, React.js, JavaScript, HTML, CSS, C++, Docker, AWS, Git, Github/Gitlab, Tailwind CSS, Bootstrap CSS, CLI, Linux, TypeScript, Kubernetes, Excel

Management/Design Skills: ClickUp, Slack, LucidChart, Trello, LaTeX, CRM

Portfolio (Projects/Certifications): <https://ergodicentropy.github.io/>

Experience

2023-2024

Ecole Centrale Casablanca, Innovation Lab

Intelligent Tutoring System Architect (BloomAI)

- Developed the MVP of an intelligent tutor system, BloomAI, based on prior research.
- Designed the system's architecture using Bloom's Taxonomy and integrated LLM technology with front-end interfaces (Swarm Agents System solution).
- Integrated Zone-of-Actual Development architecture to incentivize student auto-regulation, based on the works of Lev Vygotsky's Social Learning theory.
- Deployed BloomAI locally at the school for initial testing and feedback.

2022-2023

Professional Cesure

Applied Mathematics and Data Science Instructor

- Taught essential mathematical concepts for data science, including linear algebra, calculus, and probability for high-schoolers.
- Simplified complex topics such as matrix operations, optimization techniques, and statistical models for student comprehension.
- Guided students in applying mathematical principles to real-world data science problems and projects.
- Taught students meta-learning models for efficient learning based on Bloom Taxonomy and Mastery Learning.

2021-2022

Ecole Centrale Casablanca, Research Lab

Educational Data Analyst (Research Assistant)

- Collected and analyzed student data at school using constructivist learning theory.
- Applied Bloom's Taxonomy to assess student learning and identify challenges through data analytics.
- Co-authored a research paper on integrating AI and connectivism in education.

Hobbies

Cybernetics Popularization

President, Cybernetics Revival Club

Writing/Reading

Science Vulgarization

Blogging

Blogger, Substack

<https://ergodicentropy.substack.com/>

Competitive Programming