SBAI
AHMAD

SUMMARY

Technical Solutions Engineer and Data Science student with a 3-year foundation in Mechatronics Engineering. Expert in building modular Python architectures, real-time signal processing pipelines, and automated business tools. Proven track record in developing full-stack analytical applications ranging from NLP sentiment engines to SQL-integrated gambling simulatorsto drive operational efficiency and data-driven insights

CONTACT

- +34 678 680 253
- sbaia1870@gmail.com
- Barcelona, Spain
- Ahmad_sbai

SKILLS

DATA & ANALYTICS

- Python (Pandas, NumPy, SciPy)
- SQL (SQLite)
- Tableau
- Excel
- Predictive Modeling
- NLP Sentiment Analysis

ENGINEERING & ARCHITECTURE

- Real-Time Signal Processing
- Autocorrelation
- Multi-threading
- Modular Architecture
- Git
- Version Control

SOFTWARE DEVELOPMENT

- C/C++
- MATLAB
- CustomTkinter (GUI Design)
- API Integration
- Process Automation

LANGUAGES

- Arabic (Native)
- English (Full Professional)
- French (Intermediate – Reading/Comprehension)

CERTIFICATIONS

- **Microsoft Azure Workshop** | Asia Pacific University & Microsoft Partner Silver Learning Institution
- **MATLAB Onramp Certificate** | MathWorks Online Platform
- **MATLAB Workshop Participation** | Asia Pacific University

EDUCATION

HARBOUR.SPACE BARCELONA
Bachelor of Science in Data Science

2025 – Present

ASIA PACIFIC UNIVERSITY
Bachelor of Engineering in Mechatronics

2020 - 2024
Completed 4 years of comprehensive engineering curriculum, including robotics, embedded systems, and automation control, before transferring focus to Data Science.

FEATURED TECHNICAL PROJECTS

HR ANALYTICS DATA PIPELINE | LEAD DEVELOPER

- Architected a modular CRUD-based Python application with persistent CSV storage for enterprise employee data management.
- Engineered a predictive analytics engine to simulate and forecast company-wide budget impacts based on salary adjustments.
- Designed a dynamic CustomTkinter graphical interface for real-time statistical aggregation and automated HR reporting.

REAL-TIME VOCAL PITCH ANALYZER | LEAD DEVELOPER

- Engineered a multi-threaded Digital Signal Processing (DSP) pipeline using Python to track fundamental frequencies with 100ms latency.
- Implemented autocorrelation math and Hanning windowing to eliminate harmonic interference, visualizing data dynamically with Matplotlib.

TEXT ANALYZER PRO (NLP ENGINE) | LEAD DEVELOPER

- Developed a local Natural Language Processing tool utilizing TextBlob for sentiment polarity analysis (Positive/Negative/Neutral).
- Built custom parsers to ingest .pdf and .docx files, implementing algorithms to extract word frequencies and filter stop-word noise.

CHAMPIONS LEAGUE GAMBLING SIMULATOR | CO-DEVELOPER

- Architected a persistent SQLite database for user management and simulated a threaded knockout tournament.
- Integrated the DeepSeek AI API for dynamic data generation and implemented object-oriented betting mechanics.

WORKING EXPERIENCE

PYTHON AUTOMATION DEVELOPER (CONTRACT)
ESTRACOM (Morocco) | 2024 - 2025

- Engineered a custom Digital Archiving System in Python, digitizing the company's entire paper-based legacy archive.
- Built a searchable database interface that reduced document retrieval time by over 80% for administrative staff.

FREELANCE SOFTWARE DEVELOPER
Remote | 2023 - Present

- Architected bespoke desktop applications for small businesses to automate inventory tracking and sales logging.
- Managed the full lifecycle from requirements to deployment, drastically reducing manual data entry errors.

ELECTRONICS & PROGRAMMING INSTRUCTOR (INTERN)
Kidocode (Malaysia) | 2023

- Taught fundamental C/C++ and Python programming concepts by developing hands-on, interactive robotics projects.

HEAD OF INTERNAL AFFAIRS (STUDENT COMMITTEE)
Harbour.Space | 2025 - Present

- Engineered "Your Voice, Right Now", a real-time QR-based feedback system to streamline data collection for the student body.