Fedi Ben Abdesslem

Email: fedi.benabdesslem@eniso.u-sousse.tn
linkedin.com/in/fedi-ben-abdesslem
Mobile: +216 58 752 756
github.com/fedi-benabdesslem

About Me

Computer Science engineering student and Systems enthusiast with deep interest in bridging the gap between rigorous mathematical theory and practical engineering, aiming to transform complex low-level mechanics into intuitive, artistic solutions that solve modern engineering challenges.

Education

- **National School of Engineers in Sousse - ENISo** — Sousse, Tunisia
  Master's-level degree in Applied Computer Science Engineering — *September 2025 - Present*
  - Experience working on engineering and research-oriented projects.
  - Focus on practical, project-based learning and real-world problem solving.
  - Coursework covering algorithms, operating systems, networks, databases, and web technologies.
- **Monastir Preparatory Engineering Institute** — Monastir, Tunisia
  Physics & Technologie Pre-Engineering Studies — *September 2023 - June 2025*
  - Intensive and highly selective two-year scientific program, serving as a preparatory course for the national entrance exams to engineering schools.
  - **Rank:** 99/769 in the national entrance exam for engineering schools.
  - **Courses:** Analysis and Calculus, Algebra, Physics, Chemistry, Computer Science, Engineering Science and Technology, French, English, mechanical design and manufacture.

Academic Projects

- **Real-Time Container Security Visualization System**: (December 2025)
  - Designed and implemented a container behavior monitoring system providing real-time syscall and network-level observability for Docker containers without modifying application code.
  - Developed **eBPF programs (C)** using **BCC** to trace **Linux syscalls** and **TCP network** events, safely executed under kernel verifier constraints.
  - Built a **host-based monitoring pipeline** mapping process IDs (PIDs) to Docker containers using cgroups, /proc filesystem analysis, and **Docker Engine** metadata.
  - Implemented a **Python** event collector and enrichment layer to aggregate raw kernel events, correlate them with container context, and stream structured security events.
  - Demonstrated detection of abnormal runtime behaviors such as unexpected network connections, anomalous syscall patterns, and suspicious container interactions.
  - Emphasized low-overhead, read-only observability, ensuring minimal performance impact and strong isolation guarantees.
- **AI-Powered Writing Assistant Platform — Frontend Development**: (October 2025)
  - Designed and developed a **responsive frontend application** for an AI-powered writing assistant that transforms draft emails and meeting minutes into professional content, using **React.js** and **Tailwind CSS**.
  - Implemented **authentication flows** including user registration, login, and session handling, enabling personalized and secure access to writing features.
  - Built modular **React components** for text input, AI-generated rewrites, editing workflows, and real-time feedback presentation.
  - Integrated the frontend with **REST API** endpoints to submit user content (emails, minutes), retrieve AI-generated responses, and manage authentication requests.
  - Managed **client-side state** and **asynchronous API calls**, handling loading states, errors, and user interaction flows.

Skills Summary

- **Programming Languages**: Python, C/C++, Java, JavaScript/TypeScript.
- **Frameworks & Technologies**: Linux Kernel, eBPF, BCC, System Call Tracing, Network Monitoring, Runtime Security, Distributed Systems Observability.
- **Web & Mobile Development**: React.js, REST APIs, Frontend Architecture, UI/UX Design, Fast APIs.
- **DevOps & Tools**: Docker, Kubernetes, Git/GitHub.
- **Soft Skills**: Negotiation, Communication, Adaptability & Flexibility, Initiative & Persuasion, Time Management.
- **Languages**: Arabic (Native), English (B2), French (B1).

Certificates

Foundations of Cybersecurity - Google
Play It Safe: Manage Security Risks - Google