YASSINE ABASSI

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ABOUT ME

Tech-driven analytical engineering student with experience spanning embedded microcontrollers, full-stack web applications and robotic exploration systems. I thrive in multidisciplinary teams and enjoy turning complex challenges into simple, elegant solutions. Curious, adaptable, and always looking to push the boundaries of what I can build.

EXPERIENCE

Software Quality Assurance Intern

UPTOTEST | Ariana, Tunisia — May 2024 – Sep 2024

- Designed, automated, and maintained end-to-end functional test cases for the KOORS web application using Cypress with Cucumber (Gherkin) within a full BDD workflow.
- Collaborated closely with product owners to translate requirements into clear, testable user stories and acceptance criteria, using Jira for defect tracking, test case management, and progress reporting, ensuring traceability across sprints and releases.
- Participated in Agile Scrum ceremonies to align testing priorities with development goals.

EDUCATION

Computer Engineering

Polytechnique Montréal | Montreal, QC — Aug 2022 – May 2026

88 credits passed, 17 credits in progress.

Mathematics High School Diploma

Menzah 8 Bayrem V High School | Ariana, Tunisia — Aug 2017 – July 2021

High Honors, top 5% graduate.

TECHNICAL SKILLS

Programming languages	C, C++, Java, Python	**Specialized languages**	VHDL, Assembly, OpenGL
Web development	HTML, CSS, Javascript, Typescript	**Modeling languages**	UML, Merise
Robots/Boards	Zynq7000, ATmega164A, Pynq-Z1, Basys3 Artix-7, AgileX Limo	**Operating systems**	Linux, Windows, MacOS
Frameworks	Angular, Node.JS, NestJS, Express.JS, React.JS, Three.JS, Jest, Jasmine, Mocha, Cypress		
Environments and tools	VSCode, Gitlab, Github, PostgreSQL, MongoDB, WireShark, Vivado/SDK, Jira, Enterprise Architect		

PROJECTS

Initial Embedded System Project

- Designed and built an autonomous obstacle detection and search system using the ATmega164A microcontroller.
- Implemented low-level I/O control, sensor data acquisition, and real-time decision logic in C, based on a detailed analysis of electrical and timing specifications.
- Demonstrated the ability to transform hardware constraints into a functional embedded solution.

Computer System Design Project

- Contributed to the design of an autonomous multi-robot exploration system integrating AgileX Limo robots, ROS2, and Gazebo simulation environments. Implemented navigation, sensor processing, and inter-robot coordination in python while containerizing software modules using Docker for portability and modularity.
- Delivered demos and technical documentation, highlighting expertise in robotics, simulation, and distributed system design.

Web Application Software Project

- Developed and deployed a real-time multiplayer combat game using WebSockets, enabling seamless bidirectional communication between clients and server.
- Designed game logic, event synchronization, matchmaking flow, and responsive UI using Angular and NestJS with a focus on smooth gameplay under concurrent loads showcasing strong skills in full-stack development, real-time systems, and scalable communication architecture.

3D Interactive Personal Portfolio

- Developed a creative 3D portfolio using React.JS and Three.JS, featuring an interactive room with a functional computer OS.
- Implemented custom camera rigging and state-driven logic for seamless transitions while managing complex state for UI overlays and 3D components to ensure a responsive, high-performance experience across mobile and desktop.

COMPETITIONS

PolyHacks 2025

- Collaborated with a multidisciplinary team during a 24-hour hackathon to build WildGuard, an AI-powered ecological monitoring system designed to detect wildlife and combat poaching.
- Implemented real-time animal recognition using YOLOv8 on live video feeds and static images, integrated a lightweight frontend interface, and contributed to system design under tight time constraints demonstrating rapid prototyping skills, teamwork, and the ability to apply machine learning tools to solve real-world environmental challenges.

COMMUNITY LEADERSHIP & SERVICE

Private Tutor – Mathematics, Physics & Computer Science

Montreal, QC Sep 2021– Present

- Provided academic support to numerous college and university students in mathematics, physics and programming fundamentals.
- Helped learners solidify conceptual understanding, improve problem-solving skills, and succeed in demanding technical courses through personalized, results-focused guidance.
- Consistently improved student outcomes through an approach centered on clarity, practice, and confidence-building.

Volunteer Member

Interact Club Sidi Bou Said | Ariana, Tunisia Sep 2018– May 2021

- Contributed to humanitarian and community-driven initiatives, including fundraising events and environmental clean-ups.
- Collaborated with diverse teams to plan activities, coordinate logistics, and deliver social projects benefiting local communities.
- Engaged directly with beneficiaries to support social initiatives focused on youth development, and community well-being.

Team Captain

Avenir Ariana Soccer Club | Ariana, Tunisia Sep 2017– July 2021

- Led and motivated a competitive youth soccer team through training, tournaments, and regional competitions.
- Fostered a positive, disciplined team culture by encouraging sportsmanship, collaboration, and consistent improvement.
- Developed strong communication, teamwork, and conflict-resolution skills while keeping a positive team environment.

PERSONAL SKILLS

Fluency in English, Arabic and French, intermediate level in German.

Strong adaptability across diverse technical environments, combined with clear and effective communication skills in team-based and professional settings.

Attention to detail, ability to examine data and extract relevant conclusions.