

John El Hachem

Computer & Communications Engineering – AI Track

Ain Saadeh, Lebanon | +961-71-812708 | johnelhachem@gmail.com | linkedin.com/in/john-el-hachem | github.com/johnelhachem

Professional Summary

Fourth-year Computer & Communications Engineering student at USJ-ESIB specializing in Artificial Intelligence, with a strong foundation in software development, data-driven problem solving, and engineering design. Experienced in collaborative technical work through academic projects and internship exposure, with an emphasis on reliability, adaptability, and turning complex requirements into practical solutions.

Education

- Bachelor of Engineering in CCE** 2022 – Expected 2027
Saint Joseph University – ESIB
 - Concentration: Artificial Intelligence Track with Software Engineering Electives.
 - Selected Coursework:** Machine Learning, Computer Vision, Deep Learning, Natural Language Processing, Mining Massive Datasets, Data Structures & Algorithms.
- Lebanese Baccalaureate – General Sciences** 2022
Collège des Frères Mont La Salle *Ain Saadeh, Lebanon*

Skills

- Languages:** Python, C++, JavaScript (TypeScript), Kotlin, Java, SQL, MATLAB, HTML/CSS
- AI, ML & Computer Vision:** PyTorch, TensorFlow/Keras, Scikit-learn, OpenCV, Transformers, CNNs, RNNs/GRUs, ResNet architectures, NLP, model evaluation
- Backend, Web & Mobile:** FastAPI, React.js, Node.js, Express, Streamlit, REST APIs, JSON, Jetpack Compose, Retrofit, Firebase Authentication, Mapbox
- Data, DevOps & Cloud:** MongoDB, PostgreSQL, SQLite/Room, Redis, Git, Docker, Linux, AWS (Lambda, IAM, CLI)
- Robotics & Embedded Systems:** ROS2, NVIDIA Isaac Sim, Raspberry Pi, Pixhawk/ArduPilot, MAVLink, telemetry integration
- Core Concepts:** OOP, Data Structures & Algorithms, Full-stack Development, Prompt Engineering, Networking (CCNA1)
- Languages Spoken:** Arabic (Native), English (Fluent), French (Fluent), Spanish (Basic)
- Soft Skills:** Leadership, Teamwork, Problem-solving, Time Management, Adaptability

Experience

- Robotics Intern** Feb 2026 – Mar 2026
InMind Academy - inmind.ai *Mansourieh, Lebanon*
 - Built modular autonomous navigation modules using ROS2, C++ and Python within NVIDIA Isaac Sim.
 - Containerized and deployed scalable solutions with Docker, integrating AI-driven navigation algorithms.
- Library Assistant – E-Repository Management** 2024 – 2025
Saint Joseph University (ESIB) *Beirut, Lebanon*
 - Managed digital platform operations for a **500+** user base, maintaining **100%** system availability.
 - Streamlined platform workflows through IT coordination, increasing user resource engagement by **20%**.

Projects

- Vision-Based Autonomous Quadcopter Tracking System** Feb 2026 – May 2026
Multidisciplinary Design Project (Raspberry Pi 5, Pixhawk, OpenCV, MAVLink)
 - Co-developed an indoor GPS-denied quadcopter tracking system integrating real-time visual target detection with autonomous flight guidance.
 - Implemented the CCE software stack, including Raspberry Pi vision processing, MAVLink communication, Pixhawk configuration, and telemetry setup.
 - Designed a perception-to-control pipeline that computes target pixel offsets and converts them into corrective motion commands for indoor target following.
- AeroFusion – Aircraft Trajectory Reconstruction** Mar 2026 – Apr 2026
Machine Learning System (PyTorch, BiGRU, FastAPI, Streamlit, Docker)
 - Built a sequence-to-sequence BiGRU pipeline to reconstruct continuous transatlantic aircraft trajectories by fusing ADS-B context with sparse ADS-C waypoints.
 - Achieved **64.0 km** median position error on held-out crossings, outperforming a great-circle baseline by **51%**.

- Developed a deployable demo and inference stack using Streamlit, FastAPI, and Docker for interactive trajectory reconstruction and model serving.

- **InterviewAI – Real-Time Interview Behavior Analyzer**

Mar 2026 – May 2026

- *Computer Vision Application (FastAPI, React, ResNet50V2, Landmark Detection)*

- Developed a real-time webcam-based interview feedback system analyzing eye contact, posture, body stability, self-touch gestures, and facial emotion.
- Integrated landmark-based behavioral scoring with a fine-tuned ResNet50V2 emotion recognition service for live candidate feedback.
- Built a modular full-stack architecture with a FastAPI backend, dedicated emotion inference service, and interactive React dashboard.

- **Wayno – Lebanon City Discovery App**

Mar 2026 – Apr 2026

- *Mobile & Full-Stack Application (Kotlin, Jetpack Compose, Node.js, MongoDB)*

- Built a full-stack Android application for discovering nearby places, live events, weather-aware suggestions, and personalized trip planning across Lebanon.
- Developed a Kotlin/Jetpack Compose client and Node.js/Express backend, integrating MongoDB, Mapbox navigation, and Firebase authentication.
- Implemented an AI-powered itinerary planner using Groq/LLaMA and supported saved trips, favorites, and enriched place discovery workflows.

- **LegalMind – Contract Risk Analyzer**

Oct 2025 – Nov 2025

- *NLP Analysis System (RoBERTa, SBERT, Gradio)*

- Built an end-to-end NLP pipeline for contract risk analysis, combining transformer-based classification, semantic processing, and structured PDF report generation.
- Deployed an interactive Gradio interface enabling users to query **17 risk categories** across uploaded contract documents.

Certifications

- **AWS Certified Cloud Practitioner (CLF-02)**

Jan 2025

- **Cisco CCNA 1: Introduction to Data Networks**

Jan 2025