Leen Ahmad Chihadeh
Beirut, Lebanon | +961 76871259 | shhadehleen@gmail.com

Computer and Communication Engineer at Rafik Hariri University. Experienced in machine learning, signal processing, and embedded systems, with hands-on development of AI-based solutions. Recognized for strong communication, leadership, and collaborative problem-solving skills.

Education

Rafic Hariri University 2022 – 2026
Bachelor of Engineering in Computer & Communication Engineering Mechref, Lebanon

Al-Jarmaq High School 2022 – 2026
Lebanese Baccalaureate (Life Science) Saadnayel, Lebanon

Projects

EEG-Based Age Prediction: A Machine Learning Approach for Improved Neurophysiological Monitoring – BE Project Sep – May 2026

- Developed an EEG-based age prediction model using signal preprocessing, feature extraction, and supervised machine learning algorithms to improve neurophysiological assessment accuracy.

Elevator Control System Design – Logic Design

- Designed and implemented a digital elevator control system using logic gates and sequential circuits to manage floor requests and optimize movement efficiency.

Cedar Vehicle Database Management System – Database Management Systems

- Built a relational database system for vehicle management using SQL, including schema design, data normalization, and efficient query handling.

FlyFar Travel Agency Platform – Software Engineering

- Developed a travel agency platform with user-friendly interfaces, implementing booking, search, and customer management features following software engineering principles.

Scalable and Secure Network Infrastructure Design – Networking

- Designed a secure and scalable university network infrastructure incorporating routing, switching, and security protocols to ensure reliability and data protection.

University Campus Network Implementation – Computer Networks

- Implemented a campus-wide network using networking devices and protocols, focusing on connectivity, performance optimization, and fault tolerance.

Handheld Obstacle Detection System for Visually Impaired – Embedded Systems Design

- Developed a portable obstacle detection device using embedded systems and sensors to assist visually impaired users with real-time navigation support.

Inductive Generator Design – Electromagnetics

- Designed and analyzed an inductive generator based on electromagnetic principles to convert mechanical energy into electrical energy.

Solar Panel Electrical Kit using Arduino – Electrical & Computer Engineering

- Built an Arduino-based solar energy kit to demonstrate energy conversion, storage, and basic power management concepts.

Car Accident Statistical Analysis using SPSS

- Conducted statistical analysis on car accident data using SPSS, applying probability models and data visualization techniques to identify trends and insights.

Finite State Machine Applications (TCP & Drone Controller) – Theory of Computation

- Modeled and analyzed real-world systems using Finite State Machines (FSM), including TCP connection management and drone flight control systems, defining states, transitions, and event-driven behaviors.

Barakah Bytes Islamic Web Platform – Web Programming

- Developed a comprehensive web platform integrating e-commerce, Qur'an learning tools, Tajweed resources, and Hajj/Umrah booking to provide an accessible and user-friendly digital Islamic experience.

Secure Communication System (Build, Attack, Defend) – Cybersecurity

- Designed and implemented a secure communication system using AES encryption, SHA-256 hashing, and RSA digital signatures, and evaluated its robustness against attacks such as eavesdropping, tampering, and impersonation.

Rainfall Prediction using Machine Learning – Machine Learning

- Built predictive models (KNN, Random Forest, Logistic Regression) using real-world weather data, applying data preprocessing, feature engineering, and cross-validation to analyze and forecast rainfall patterns.

Celestra E-commerce Mobile Application – Mobile Application Development

- Developed an Android-based e-commerce application using Kotlin and Firebase, implementing features such as product browsing, cart management, wish list, authentication, and secure checkout.

Voice Similarity Recognition

- Signal processing pipeline using correlation and normalization techniques to compare identify voice patterns.

Secure Communication Simulation

- Python-based encrypted messaging between two parties using AES-128, SHA-256, HMAC, Diffie-Heilman, and RSA across three phases.

Experience

Trainee – Ogero (8 weeks) June 2025 – July 2025

- Gained hands-on experience in telecom networks and exchange systems
- Learned copper (ADSL/VDSL) and fiber optics technologies (FTTx)
- Worked with network components (MDF, cabinets, cable systems)
- Performed basic fiber testing and understood optical link design

Skills

Technical Skills:

- **Programming:** C/ C++ , Python, SQL Query, Kilton, Java, Java Script, XML, and HTML & CSS
- **Libraries & Framework:** OpenCV, NumPy, Matplotilb, NLTX, SpaCy, Scikit-learn, and HTML5
- **Cybersecurity:** AES/RSA, SHA-256/ HMAC, Diffie-Heilman, Wireshark, VirtualBox, and MFA
- Networking: CCNA 1/2/3, Cisco Packet Tracer, Active Directory, Azure AD, VMware, and VPN
- **Artificial Intelligence:** Reinforce, Supervised, Unsupervised, and Artificial Neural System.
- **Machine Learning:** Signal processing, feature extraction, KNN, MLP, SVM, RF, LightGBM, CatBoost, XGBOOST, Decision Tree, Linear Regression, and Logistic Regression
- **Simulation & Design:** MATLAB, Tinkercad, AutoCAD, CST Studio, SPSS, Collab, Visual Studio, Arduino, and Raspberry Pi
- **Tools:** Microsoft Office

Social Skills:

- Excellent time management, multitasking, and organizational skills
- Strong ability to communicate and interact effectively
- Ability to work efficiently in teams and under pressure
- Strong oral, written, and presentation skills
- Highly adaptable to new environments and challenges
- High accuracy and attention to detail
- Strong sense of responsibility and reliability
- Effective resource management and results-oriented mindset
- Ability to train and onboard new employees

Languages

- **Arabic:** Native
- **English:** Fluent

Awards & Affiliations

Honors and Rewards:

- University Scholarship
- Dean’s Honor List
- President’s Honor List
- The self-paced training course MATLAB ONRAMP

- CCNA: Introduction to Networks through the Cisco Networking Academy programs
- CCNA: Switching, Routing, and Wireless Essentials
- CCNA: Enterprise Networking, Security, and Automation
- CCNA: Cybersecurity Essentials-SP 26

Community Involvement:

- Vice- President, Women in Engineering (WIE) 2025 – 2026
- Member, Institute of Electrical and Electronics Engineers (IEEE) & Women in Engineering (WIE)
  2022 – 2026
- Board Member, Community Service Club (CSC) 2024 – 2026
- Board Member, Artificial Intelligence Club (AI) 2023 – 2026

Volunteering:

- Volunteer, Alghawth Humanitarian Development Association (الغوث الإنساني للتنمية) 2019
- Volunteer, Beirut Explosion Relief Response 2020
  - Participated in distributing hygiene and dignity kits across affected areas in Beirut.
  - Conducted data collection and referred affected cases to relevant associations and organizations.
- Volunteer, Al Najdeh Association 2018 – 2019
- Basketball Coach Volunteer, UNRWA Youth Project 2021 – 2022
- Volunteer, Danish Refugee Council (60 Training Hours) 2023
- Volunteer, West Bekaa Official Schools Support Initiative 2024
  - Supported and assisted displaced individuals and families.
- Participant, Drug Awareness and Protection Sessions 2018
- Participant, Anti-Bullying Workshops and Sessions 2018 – 2020
- Participant, Amideast Skills Development Workshops 2019
- Participant, Gender-Based Violence (GBV) Workshops 2019 – 2020
- Trainee, Positive Thinking and Hope Reinforcement Trainings 2019
- Trainee, Time Management and Working Under Pressure Trainings 2020
- Trainee, Communication and Food Distribution Management Trainings 2021
  - Trained on effective communication and dealing with beneficiaries during food distribution activities.