

Giorgio Bachour

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Languages: English (Fluent), Arabic (Conversational), French (Basic)

Education

American University of Beirut (AUB)

Bachelor of Engineering – Computer and Communications Engineering

Expected Graduation: 2027

Relevant Coursework: Data Structures, Computer Architecture, Digital Design, Signals & Systems, Communication Systems

Technical Skills

Programming: Python, C++, MATLAB

Tools: Git, VS Code, MATLAB

Systems & Concepts: Client–Server Architecture, Socket Programming (TCP), Real-Time Systems, Network Configuration (VPN, Subnet Routing)

Projects

Multiplayer Networked Snake Game (Python, Sockets)

Built a real-time multiplayer system using Python and TCP sockets, implementing a client–server architecture with synchronized game state and low-latency communication.

- Designed and implemented a client–server architecture for real-time gameplay
- Developed a server handling state synchronization, collision detection, and game loop timing
- Built a custom communication protocol for movement, chat, and game state updates
- Implemented an AI opponent with navigation and collision avoidance logic

Private Server Infrastructure & Systems Deployment

- Designed and deployed a Linux-based private server environment with controlled remote access
- Configured VPN authentication and subnet routing for secure multi-device connectivity
- Structured network architecture to minimize exposed endpoints and improve system reliability

AI-Based Data Processing & Classification Application

- Developed a Python-based data transformation and classification tool
- Implemented modular data pipelines with a Gradio-based interface for testing and validation
- Deployed and evaluated inference workflows in a cloud environment

Digital Communications Systems Simulation

- Implemented BPSK and QPSK transmit–receive chains in MATLAB
- Modeled noisy channel environments and evaluated BER performance
- Structured signal processing pipeline including modulation, transmission, and decoding

Technical Volunteering (Web Integration Support)

- Assisted in integrating HTML/CSS front-end with encryption logic
- Supported structured UI-to-algorithm interaction