IYAD ALHASAN

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PROFESSIONAL EXPERIENCE

- **Golden Electronics, Amman, Jordan.**
  - **ASIC Digital Design & Verification Engineer (Team Lead) • July 2021 - August 2023:**
    - Testing and debugging RTL code of 1G/10G/25G/40G/100G Ethernet's (802.3) PCS sublayer IP core.
    - Code Coverage analysis and corner cases detection using VCS.
    - Results reporting automation & flow automation using BASH, Python, TCL.
    - Run and debug errors occurring in RTL signoff flows such as Lint, CDC, RDC, Synthesis and Power intent (UPF) for Ethernet's (802.3) 1G/10G MAC sublayer IP core.
    - FMEDA & DFMEA automation scripts debug (TCL).

- **Dimitri's Coffee Factory, Amman, Jordan.**
  - **IoT Engineer • March 2021 - June 2021:**
    - Build various IoT sensor nodes targeting coffee roasting & brewing processes monitoring using custom designed PCB boards.
    - PCB design using Altium.
    - Products deployment in coffee House Branches and data collection for ML training purposes.

EDUCATION

- **Master of Science in Computer & Systems Engineering: 2023 – 2025.**
  - **University of Houston, Houston, Texas. GPA: 4.0.**
    - **Relevant Coursework & Projects:**
      - **VLSI Design:** Designed 2GHz Semi-Dynamic flipflop using Cadence Virtuoso (180nm technology).
      - **CMOS Analog ICs:** Designed a 2 Stage OPAMP and built a Butterworth filter using Cadence Virtuoso (180nm technology).
      - **Digital Signal Processing:** Designed a Filter to separate Morse code Hidden in Beethoven music using MATLAB.
      - **Introduction to Cybersecurity**.
      - **RTOS for IoT**: Designed a Clock and Calendar app using RTOS features developed in class.
    - **Active Research Topic:** Implementing an FPGA based hardware accelerator for Fully Homomorphic Encryption. **Advisor:** Dr. Biresh Joardar.
    - **Teaching Projects:** FPGA Hardware acceleration guide. Link: FPGA Acceleration Guide.

- **Bachelor of Science in Electrical Engineering: 2016 – 2021.**
  - **Jordan University of Science and Technology, Irbid, Jordan. GPA: 3.82.**
    - **Academic Graduation Project:** Designed an LCL filter for Grid-Connected Source Converter and carried out all control & stability analysis using MATLAB & Simulink.

TECHNOLOGIES USED

- **Languages:** C, C++, TCL, Perl, Python, BASH, TCSH, System Verilog.
- **Tools:** MATLAB/Simulink, Synopsys Design Compiler, Synopsys Fusion Compiler, Synopsys Spyglass, Synopsys VC Spyglass, Synopsys VCS, Cadence Virtuoso, LT-Spice, Xilinx Vivado, Perforce, Git.
- **Communication Protocols/Interfaces:** Ethernet Protocol (802.3), AMBA Protocol (APB, AHP, AXI), XAUI.

- **Achievements/Awards:**
  - Voted best in team & promoted to Team Lead (2022, Golden Electronics).
  - Awarded a competitive scholarship by the University of Houston.
- **Extra-Curricular Work:** IEEE JUST Member, Science shows content creator at Naqsh, Kahrabji Team academic member, Design of a Prayer Times AI chatbot website, Electronics undergraduate courses teacher.
- **Work Eligibility:** Eligible to work in the U.S.