Ahmed Tawfik

Digital IC Design Engineer

About me

- I'm a Digital IC Design Engineer and a 3rd-year Electronics & Communication Engineering student at Helwan University.
- Passionate about RTL design, verification, and ASIC flow, with hands-on experience in building digital systems from scratch. My goal is to contribute to advanced semiconductor technologies and pursue an international career in chip design.

Educational Background

Electronics and Communications Engineer

2021 - 2026

B.Sc. Electronics & Communication Engineering
 Helwan University, Egypt – Expected Graduation: 2026

Personal Skills

- Hardware Description Languages: Verilog, SystemVerilog (basic)
- Digital Design: RTL design, FSMs, ALUs, FIFOs, UART, SPI, I2C
- ASIC Design Flow: RTL → Synthesis → PnR → STA → Sign-off (studying & practicing)
- EDA Tools: Synopsys, Cadence (exposure), LabVIEW (basic for SDWN/NFV project)
- Computer Architecture: RISC-V (currently implementing)
- Simulation & Testbenches: Writing self-checking Verilog testbenches
- Other Skills: Teaching complex topics simply, strong research ability

Professional projects

- UART TX & RX – Designed and verified a complete serial communication interface.
- FIFO Implementation – Built synchronous FIFO for data buffering.
- ALU with 28 Functions – Designed and verified using a testbench at 100 kHz with custom duty cycle.
- Deserializer Module – Converted serial data to parallel output with verification.
- PCIe Graduation Project – Currently developing a PCIe or PCIe-over-UCIe adapter for ASIC implementation.
- RISC-V Core – In progress: implementing and verifying a custom RISC-V processor.
- SDWN/NFV in LabVIEW – Designed a beginner-level project integrating networking concepts with LabVIEW.

Career Goals

- Master Digital IC Design & ASIC Flow.
- Work on cutting-edge semiconductor projects abroad.
- Build and share open-source hardware projects.
- Continue making educational content (YouTube channel: Tawfik is Learning).

Let's Work Together

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