

Yousef Khojah

608 E University Ave, Champaign, IL, 61820 | yousefk2@illinois.edu | (814) 441 8262 | [Project Portfolio](#)

EDUCATION

Bachelor of Engineering in Electrical Engineering

Anticipated Graduation: May 2027

University of Illinois at Urbana-Champaign, IL

- Relevant Coursework: *Digital Systems Laboratory, Analog Signal Processing, Computer Systems & Programming, Statistics and Probability*

Certifications

- **KAUST Gifted Student Program - Foundation Year Program,** **Sep 2022 – June 2023**
Pennsylvania State University, State College, PA
 - A customized full-time college preparatory program focusing on ESL coursework and college-level classes. With academic tutoring: writing, math, essay coaching

PROJECTS

2D Platformer Video Game on Spartan-7 FPGA

November 2024 – December 2024

- Designed a Super Mario Bros-inspired 2D platformer using the Xilinx Spartan-7 FPGA and the MicroBlaze processor. Developed key game components in SystemVerilog, including accurate dynamic collision detection using color mapping for multiple levels, sound effects, advanced graphics, text graphics manipulation, and character status control (win/death). The game featured keyboard controls and optimized memory management due to the limited BRAM space in the FPGA

RESEACH EXPERIENCE

King Abdullah University of Science and Technology, Thuwal, Saudi Arabia

June 2021 – May 2022

Research Intern – Electrical Engineering Dept.

- Worked on a project under Dr. Al-Attar's mentorship to enhance an analog communication system's performance and overcome its limitations using Software-Defined Radio techniques
- Characterized components from antennas, power amplifiers, local oscillators, and band-pass filters
- Tested different carrier frequencies to verify its transmission of digital data with a low bit error rate

AWARDS & HONORS

Recipient – KAUST Gifted Student Program (KGSP) Scholarship

April 2022 – Present

- KGSP is a prestigious scholarship awarded by King Abdullah University of Science & Technology to a select group of Saudi students to pursue undergraduate degrees in STEM fields in the US

Award Winner – K.Soumyanath Memorial Award

May 2022

- K. Soumyanath memorial special award received at International Science and Engineering Fair for presenting my research project on communication systems clearly with understanding of its methodology

SKILLS

Research, Technical: Software-Defined Radio, Communication Systems, Programming in C/C++ & Python, GNURadio Program, Vivado, SystemVerilog

Language: Arabic (Native), English (Fluent)