



# Kinan ALI

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## EDUCATION

<b>Higher Institute for Applied Sciences and Technology (HIAST)</b> – Damascus, Syria 	<b>September 2024</b>
<i>Bachelor of Science in Electronic Systems Engineering</i>	<i>Cumulative GPA: 79.15%</i>
<b>National Center for Distinguished (NCD)</b> – Latakia, Syria 	<b>October 2019</b>
<i>High School Diploma</i>	<i>Cumulative GPA: 82.85%</i>



## TECHNICAL SKILLS

- MATLAB coding and simulation / Python, C++, C / Wolfram Mathematica (Analytics).
- Arduino / Raspberry Pi / FPGA / PSpice, Proteus (Circuit design and simulation) / CodeVision.


## RELEVANT COURSEWORK

- **Math:** Mathematics for Engineers, Linear Algebra, Complements in Linear Algebra, Numerical Analysis I & II. Mathematical Analysis I & II, Complements in Mathematical Analysis.
- **Control Systems:** System ID, Analog/Digital Control, Multivariable Control, Advanced/Nonlinear Control, Robotics I.
- **Programming:** Introduction to AI and Machine Learning, Real-time Systems, Object Oriented Programming Techniques.

## PROJECTS

<b>Design and Implementation of a Universal Washing Machine Control Board.</b> (Alameen-tronics startup)	<b>December 2024</b>
<ul style="list-style-type: none"><li>➤ Developed a TRIAC-triggered PID motor controller on ATmega16 (CodeVision).</li><li>➤ Designed full control board in Proteus; interfaced with LCD and button panel.</li><li>➤ Delivered four complete washing programs simulating industrial standards.</li></ul>	
<b>Adaptive Control for Stewart Platform using Neural Networks</b> – Graduation Project	<b>September 2024</b>
<ul style="list-style-type: none"><li>➤ Designed an adaptive, data-driven controller using neural networks to compensate for motor backlash.</li><li>➤ Implemented visual pose estimation with Python/OpenCV and validated performance through trajectory tracking.</li><li>➤ Proposed a reliable data collection algorithm to learn a neural network controller for pose control.</li><li>➤ Compared traditional vs. learned control methods; results showed improved robustness.</li></ul>	
<b>Implementation of an obstacle avoidance algorithm for mobile robots</b> – Workshop 	<b>May 2024</b>
<ul style="list-style-type: none"><li>➤ Implemented the <i>Extended Potential Field</i> algorithm for mobile robot obstacle avoidance.</li><li>➤ Simulation was performed using Webots software.</li><li>➤ Practical implementation was executed using the E-puck Robot.</li></ul>	
<b>Theoretical study and practical comparison of the control of 3RRR PPM</b> – Fourth-year Project 	<b>September 2023</b>
<ul style="list-style-type: none"><li>➤ Modeled, analyzed, and controlled a planar parallel manipulator (3RRR PPM) using MATLAB and Python.</li><li>➤ Performed singularity analysis on MATLAB and calculated the manipulator's workspace.</li><li>➤ Performed practical comparison of traditional control methods (open loop, closed loop) and data-driven control techniques to track trajectories using camera feedback.</li></ul>	

## ACTIVITIES AND ACCOMPLISHMENTS

➤ First Project Prize – Hitech Conference for Intelligent Systems	<b>June 2024</b>
➤ Top Student – HIAST Class of 2024 (Average: 87.08%)	<b>October 2024</b>
➤ Participant – Faculty of Mechanical and Electrical Engineering Exhibition (FMEE)	<b>October 2024</b>
➤ Volunteer Tutor – Paper Airplanes English Program 	<b>September 2024 - present</b>
➤ Tutor and Team Member – Syrian National Physics Olympiad	<b>2017 - 2021</b>
➤ Guitar Tutor – HIAST Student Activities	<b>2022 - 2023</b>