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Aryan Jha

B.Sc. Systems Engineering Student

Enthusiastic Systems Engineering student with hands-on experience in CAD/CAM, FEM analysis, microcontroller programming, and automation. Passionate about learning and applying new technologies in digital manufacturing and Industry. Fluent English, working German.

Experience

Mechanical Design & Prototyping

- Designed and modeled complex mechanical assemblies for engineering projects
- Created detailed technical drawings and documentation for manufacturing
- Developed prototypes using 3D printing (FDM/SLA)

Embedded Systems Development

- Prototyped Arduino/PIC/Raspberry Pi systems for sensor integration and automation
- Interfaced I2C/SPI sensors for real-time data acquisition and monitoring
- Developed C/C++ and Python firmware for embedded control systems

Programming

- Built responsive websites and interfaces using HTML, CSS, and JavaScript
- Developed scripts for data analysis, automation, and process optimization
- Programmed microcontrollers and embedded systems for hardware control in C/C++
- Performed engineering calculations, simulations, and data visualization in MATLAB

Education and Certifications

SystemsEngineering - Maschinenbau
Universität des Saarlandes
| 2023 - Present (Expected 2027)

Relevant Coursework: CAD/CAM, FEM Analysis, Manufacturing Technology, Automation, MATLAB, programming in C/Python, Circuit Analysis, Material Science, Thermodynamics

Certifications

BrownX: Aerodynamics and Thermal Fluids
MITX: Introduction to Engineering Design
HarvardX: Energy and Thermodynamics
AlaskaX: 3D Printing Essentials

Skills

- **Programming Languages:** Python, C/C++ , HTML/CSS MATLAB
- **CAD/Design:** Inventor, SolidWorks, Fusion 360,AutoCAD
- **Analysis & Simulation:** ANSYS, MATLAB, FEM, Simulink
- **Embedded Systems:** Arduino, Raspberry Pi, ESP32 PIC
- **Microsoft Office:** Word, Excel, PowerPoint

Projects

- **Power Transmission System -** Mechanical assembly design with gears and bearings (Inventor)
- **Heat Sink Thermal Analysis -** FEM thermal optimization for cooling performance (ANSYS)
- **Shock Absorber Design -** Spring system with stress analysis and optimization (Inventor, FEM)
- **Component Library -** Parametric CAD models of mechanical parts (SolidWorks, Inventor)
- **Arduino Control Systems -** LED control and HID interface projects (Arduino, C++)