

AJAY SOHAL

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TECHNICAL SKILLS

Programming Languages: C, Python, VHDL, Visual Basic(Basic), Java(Beginner)

Data Science & Analytics: MS Excel, Google Suite, Anaconda, Jupyter Notebook

Web Technologies: HTML, CSS, Javascript(Beginner)

Developer Tools: Git, VS Code, PyCharm, Thonny, Arduino IDE, Processing IDE

Electrical / Electronics Tools : Pspice, LTSpice, MATLAB, Simulink, Ukeil, Jubin 8085, Octave
Origin Lab, Proteus, KiCad

Designing and Prompting: Canva, Adobe Lightroom, AI Tools

PROJECTS

Low Cost ECG Machine | Low-cost, stable, and portable 3-lead ECG machine using an Arduino UNO and AD8232 sensor, achieving 80% efficiency.

Implementation of CMOS Logic Gates | Designed and implemented various CMOS logic gates, including full adders, multiplexers (MUX), and demultiplexers (DE-MUX) in VHDL, while studying their characteristics.

Drowsiness Detection System | Efficient drowsiness detection alert system for drivers utilizing an IR sensor and Arduino Uno, achieving 75% efficiency.

Django based Web App | To-do list and blog web app using Python and Django framework.

EXPERIENCE

Intern Chandigarh, India
CSIO-CSIR Jan 2023 - May 2023

- Developed expertise in TDLAS spectroscopy, encompassing wavelength modulation and referencing techniques to gather data from gas sensors and performed thorough data analysis.
- Studied and analyzed various signal processing algorithms

Intern Chandigarh, India
Design Innovation Centre, Panjab University July 2022 - Aug 2022

- Innovated a cost-effective, transportable, and high-performing spectroplotter based on the Raspberry Pi, contributing to the visible spectroscopy project's success leading to significant advancements with 75% accuracy and efficiency.

Intern Chandigarh, India
DGRE-DRDO Aug 2021 - Sep 2021

- Implemented a credit card fraud detection project, utilizing Isolation Forest and Random Forest algorithms in Python, achieving 80% efficiency.
- Demonstrated comprehensive knowledge of machine learning concepts, algorithms, and practical applications, playing a key role in the project's overall success.

Trainee Chandigarh, India
TCIL-IT July 2021 - Aug 2021

- Designed, implemented, and tested a LAN-based campus networking project using Cisco Packet Tracer and understanding networking protocols

EDUCATION

Bachelor of Engineering : Electronics and Communication

Chandigarh , India

Chandigarh College of Engineering and Technology, Panjab University

GPA : 3.0/4.0

- **WebMaster** - ACM
- **Member** - Achintyam(Photography Club)

ACHIEVEMENTS

- Awarded Speaker at PGI on the topic "Employing Python For Experimental Data Analysis And Visualization."
- 2nd Prize in logo designing competition @ccet ACM Chapter
- Presented the project "Spectroplotter" at CHASCON 2022 , Panjab University

SPOKEN LANGUAGES

- Punjabi - *Mother Tongue*
- Hindi - *Native*
- English - *Professionally Proficient*