



# Jugal Alan

Master of Technology  
in Artificial Intelligence  
Indian Institute Of Technology, Ropar

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## EDUCATION

Degree	Institute/Board	Year
Master of Technology	Indian Institute of Technology, Ropar	2024-2026
Bachelor of Engineering	Visvesvaraya Technological University	2019-2023
Senior Secondary	Central Board of Secondary Education	2019
Secondary	Central Board of Secondary Education	2017

## PROJECTS

- Papaya Seed Adulteration Detection in Black Pepper** 2025  
*Agricultural Cyber Physical Systems* **Github**
  - Built and annotated a custom dataset of 1,277 high-resolution images (pure black pepper, pure papaya seed, adulterated in varying quantity) to train and validate a YOLOv8s object detector.
  - Achieved 88.99% mean seed detection accuracy (MSDA) on adulterated test samples, enabling reliable localization of individual pepper and papaya seeds in real time.
- NGO Management System** 2024  
*Freelance* **Github**
  - Created a functional prototype that can be utilized by NGOs to manage their internal operations more effectively.
  - Built backend logic using PHP to handle CRUD operations for various modules. Structured the MySQL database to efficiently store and retrieve NGO-related data.
  - Implemented secure user authentication and role-based access control, ensuring data integrity and restricted access to sensitive information.

## EXPERIENCE

- GlowTouch Technologies** Feb 2023 - May 2023  
*Intern* Mangalore
  - Worked alongside the operations team as a web advisor for hostgator.com, a web hosting platform.
  - Debugged deployment, cloud hosting and domain configuration for 40% of daily US based clients.
  - Recognized as the overall top performer among graduate engineering trainees.
- Take It Smart PVT LTD** Sep 2022  
*Intern* Bangalore
  - Led a 4-person team to create a desktop application that utilizes convolutional neural network to colorize grayscale images and detect objects using yoloV4.
  - Worked on an experimental project focused on classifying different algorithms based on their performance to accurately predict heart disease in patients.

## TECHNICAL SKILLS

- Programming Languages:** C/C++, Python, JavaScript, HTML, CSS
- Tools & Technologies:** Git, Flask, Bash, PostgreSQL
- Libraries & Frameworks:** Numpy, Pandas, Tensorflow, PyTorch
- Operating System:** Linux, Windows

## KEY COURSES TAKEN

- CSE:** Algorithm & Data Structure, Operating System, DBMS, Computer Networks
- Maths & Others:** Reinforcement Learning, Artificial Intelligence, Cyber Security

## POSITIONS OF RESPONSIBILITY

- Teaching Assistant, IIT Ropar** 2025 - 2026
- Class Representative, Mtech AI, IIT Ropar** 2024 - 2026

## MISCELLANEOUS

- Graduate Aptitude Test in Engineering (GATE) - Computer Science**, Ranked in the top 1 percent in India 2024
- Publication - IJCRT**, Image Colorization and Detection Using Machine Learning 2023
- Certifications - FreeCodeCamp**, Scientific Computing with Python, Relational Database, Responsive Web Design 2022
- Naval Cadet Corps (NCC) - Junior Division**, Served two years in India's voluntary tri-service youth organization 2017