

# Sai Prasana Panigrahi

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## EDUCATION

**Sambalpur University Institute of Information Technology**  
*Bachelor of Technology in Computer Science, Specialization in AI and ML*

Sambalpur, Odisha  
Aug. 2022 – May 2026

## RELEVANT COURSEWORK

- Data Structures
- Machine learning
- Artificial Intelligence
- Big Data Analysis
- OOPS Concepts
- Database Management
- Expert System
- Probability and Stats

## EXPERIENCE

### AI Research Intern – 3D Object Detection

May 2024 – August 2024

*National Institute of Technology (NIT), Py*

*Pondicherry, Karikal*

- Conducted research on 3D Object Detection and Path Tracking using state-of-the-art tools like YOLOv10, OpenCV, and the PyTorch vision module..
- Designed and implemented machine learning models to improve the accuracy and efficiency of object tracking in dynamic environments.
- Collaborated with researchers to apply findings to practical applications, such as autonomous navigation and surveillance systems..
- Presented key findings and insights during technical reviews, enhancing project visibility within the research community.

## PROJECTS

### Food Classifier | *Python, PyTorch, Numpy, Matplotlib, Scikit-Learn*

September 2024

- \* Replicated the Tiny VGG Convolutional Neural Network (CNN) for image classification using a custom dataset consisting of pizza, steak, and sushi images.
- \* Trained the model for 50 epochs, achieving a 73 percent accuracy in classifying images into the three categories.
- \* Utilized techniques like data augmentation and fine-tuning to improve model performance.
- \* Gained hands-on experience in implementing CNN architectures and working with custom datasets for real-world image classification tasks

### Chess game | *Python, Pygame*

February 2024

- \* Developed a chess game using Pygame with a user-friendly graphical interface.
- \* Implemented precise piece movement validation and comprehensive game logic, including checkmate and stalemate detection.
- \* Integrated robust rules for check, checkmate, and stalemate detection, ensuring adherence to official chess standards.
- \* Designed for scalability, with plans for multiplayer functionality and AI-based opponent integration.

### Smart Sales Insight Bot | *Python, OpenAPI, Pathway's LLM*

February 2024

- \* Built an AI-powered application using Pathway's LLM to fetch real-time sales, discounts, and deals from various online marketplaces globally.
- \* Me and my team designed an HTTP REST API endpoint enabling users to query sales information based on specific parameters
- \* Integrated OpenAI API for Chat Completion and Embedding features to enhance query processing and generate insightful responses.
- \* Delivered a dynamic, user-friendly experience for accessing up-to-date market information efficiently.

## TECHNICAL SKILLS

**Languages:** Python, Lisp, java, SQL (MySQL), JavaScript, HTML/CSS,

**Frameworks:** PyTorch, Tensorflow, Ultralytics - YOLO, Django

**Libraries:** Pandas, NumPy, Matplotlib, Scikit-Learn, Seaborn, NLTK

**Developer Tools:** Git, Docker, Google Cloud Platform, Google Collab, Anaconda, VS Code