

# ANSHUMAN SAMANTA

Durgapur, India

☎ +91-7047547258

✉ [itisanshu@gmail.com](mailto:itisanshu@gmail.com)

🌐 [Linkedin](#)

🐙 [Github](#)

## EDUCATION

### Central University of Jharkhand

*Integrated B.Tech-M.Tech - Computer Science and Engineering - CGPA - 9.14/10*

Oct 2022 – Present

Ranchi, India

### DAV Model School, Durgapur

*Higher Secondary Education - Percentage - 92%*

Apr 2020 – Jun 2022

Durgapur, India

## EXPERIENCE

### NIT Rourkela Winter Intern

Dec 2024 - Feb 2025

*Role - Research Intern*

Rourkela, India

- Developed Conditional GAN(CGAN) image synthesis and foreground extraction model with above 80% accuracy.
- Collaborated with a team of 4 to implement image matting and high-quality image synthesis, using Conditional GANs, Super-Resolution GANs, and MODNet Super-Resolution image synthesis.
- Leveraged image matting modules like MOD-Net to achieve precise alpha predictions and effective feature indexing.
- Utilized Conditional GAN, StyleGAN for background replacement and synthesis, and Super-Resolution GAN for improved image quality.
- Validated image matting results using Structural Similarity Index (SSIM).
- Analyzed GAN-generated image quality using Inception Score (IS) for virtual reality and film production applications.
- High-Quality Image Synthesis | GAN, Image Segmentation

### Machine Learning Intern, Placify Technologies

Jun 2024 - Aug 2024

*Role - Machine Learning Developer Intern*

Remote, India

- Deployed and optimized Deep Learning models, including an 85% accurate **Stock Price Prediction Model**.
- Leveraged Yahoo Finance API to get stock data (name, price, start/end dates).
- Performed feature engineering on stock data.
- Modeled an ANN using Keras framework with ReLU activation at the hidden layer and Linear Regression activation function at the output layer for stock price prediction.
- Built models for **Diabetes, Housing, and Car prices** using SVM, Linear regression, XGBoost, Logistic Regression and Decision Tree algorithms and achieved above 80% accuracy.
- Enhanced model performance through hyperparameter tuning.

## PROJECTS

### NASA Space Apps Hackathon (Finalist) | Node.js, MongoDB, Express.js, HTML, CSS

- Developed an interactive educational platform named "GlobeQuest" using Node.js, MongoDB, Express.js, HTML, and CSS for environmental science engagement.
- Utilized Express.js to set up middleware for HTTP request processing, routing, and static file serving.
- Integrated real-time data collection, storing information in MongoDB for a dynamic leaderboard system.
- Implemented multiplayer functionality to foster user collaboration and learning.
- Deployed the application on Render for seamless frontend and backend integration.

### Handwritten Digit Classifier | Scikit-learn, ANN, MNIST

- Implemented a Decision Tree Classifier with 94% accuracy using Scikit-learn for basic digit recognition.
- Enhanced accuracy to 97% by leveraging an Artificial Neural Network (ANN) on the MNIST dataset.

### Emotion Analyzer | NLTK,Tokenizer,TF-IDF

- Developed an NLP-based sentiment analysis model using NLTK and TF-IDF to determine the emotional tone of text.
- Leveraged TF-IDF word-embedding for analyzing emotional tone frequency.

### PYTHON FLASK PROJECTS [GitHub]

- **To-Do List Web App:** Built with Flask, cx\_Oracle; implemented CRUD operations and Jinja templating.
- **Bank Management System:** Built with Flask, cx\_Oracle; provided account operations and authorization features.
- **Gmail Automation:** Built with Python, SMTP, SSL libraries for bulk email and security.

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, JavaScript, Bash, React.js

**ML/DL:** TensorFlow/Keras, OpenCV, Scikit-learn

**Web:** React.js, Node.js, MongoDB, Flask

**Tools:** Git, GitHub, Android Studio, Jupyter Notebook, Spring, Spring Boot, Spring Data JPA, Hibernate (H2)