

# Prabal Birajdar

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## PROFILE

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As a motivated Computer Engineering and Computer Science student with a keen interest in AI/ML technologies, I've built a strong foundation in Machine Learning, Computer Vision, and Natural Language Processing. I'm excited about applying my AIML knowledge to drive innovative tech solutions in a dynamic work environment.

## EDUCATION

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2021 – present	<b>B.E (Computer Science Engineering)</b> <i>KLS Gogte Institute of Technology, Belgaum</i> 8.73 (CGPA)
2021	<b>Higher Secondary</b> <i>Arham college, Pune</i> 78%
2019	<b>High School</b> <i>Sindhudurg Vidya Niketan's, Vengurla</i> 91%

## SKILLS

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**Machine Learning** — Classification & Regression Algorithms, Optimization Algorithms, Feature Extraction / Reduction

**Computer Vision** — Deep Learning, Convolutional Neural Networks, Segmentation & Object recognition tasks

**NLP** — Transformers Architecture, Recurrent Neural Networks, Fine-tuning & Downstreaming tasks

**Frameworks/Libraries** — PyTorch, Huggingface Transformers, OpenCV, Scikit-learn

## PROJECTS

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### Vasculature segmentation in 3D scans of Human Kidney

- I developed a model for segmenting vasculature in 3D scans of human kidneys using CT images acquired with Hip-CT technology.
- **Data augmentation** was performed using the Albumentations library, and the segmentation model was implemented using the **Attention U-Net architecture** in PyTorch.
- This approach improved the accuracy and efficiency of kidney vasculature segmentation in medical imaging.

### Prompt Recovery using Gemma

- The primary challenge of the project lies in retrieving specific prompts for Large Language Models (LLMs), which are crucial for generating rephrased text.
- This project was centered around utilizing a dataset containing original texts along with their rephrased versions from Gemma.
- I made use of Hugging Face's transformers library and applied techniques such as **quantization** and **LoRA** to fine-tune Gemma-7b model by google, for precise prompt recovery.

## AWARDS

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**CODEFIESTA-4.0 National Level Hackathon Winner** ☑

**TCE Hackathon -2024 Winner** ☑

**Badminton - VTU Zonal winner** ☑

## ROLE OF RESPONSIBILITY

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**Rotaract GIT, Belgaum**

*Board Member*

**Google Developer's Group Devfest, Belgaum**

*Student Co-ordinator*