

# SAKSHAM SHARMA

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## EDUCATION

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**Indian Institute of Technology BHU, Varanasi**

**July 2019 - June 2023**

*B.Tech. in Metallurgical Engineering*

*CGPA - 8.34*

**Adarsh Public School**

**May 2019**

*M.P. State Board (XII)*

*Percentage - 85.4*

**Holy Family Convent Sr. Sec. School**

**May 2017**

*CBSE (X)*

*CGPA - 10*

## WORK EXPERIENCE

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**Rgen.ai | ML Engineer Intern**

**13 March 2022 - Present**

- Built an end-to-end pipeline which generates a **talking head video** of a user saying a provided input text.
- Researched various **Text-to-Speech, Voice-Conversion, Talking-Head-Generation** models.
- Fine-tuned different **GAN** and **Diffusion** based models to adapt and work with Hindi language .
- Building a robust **One-Shot-Model Pipeline** which learns from just one sample input for new users.
- **Exposure** : PyTorch, TensorFlow, GANs, Diffusion Modelling, One-Shot-Models.

**ExaWizards | ML Engineer Intern**

**30 May 2022 - 31 Aug 2022**

- Worked on optimizing a children surveillance system at day care centers to detect kids in a frame and then further classify them based on their expressions.
- Experimented with various object detection and image classification models to find models with **good inference speeds and accuracy**.
- Converted the models trained on **PyTorch** to **TensorRT** for edge device inference on **Jetson Nano**.
- Finally implemented a Facial Recognition Algorithm to find out kids in need of attention.
- Achieved an overall **inference speed increase of two times keeping the inference accuracy almost constant** as compared to the already existing pipeline.
- **Exposure** : PyTorch, ONNX, TensorRT, Edge Computing.

## PROJECTS

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**Exercise Instructor**

- Created a **Pose estimation model** for detecting **body points** of a person while exercising.
- Implemented diffnet models like **PoseNet, AlphaPose, MediaPipe BlazePose** on **TensorFlow**.
- Selected PoseNet as pose estimation model and **collected data** for different exercises using it.
- Created a **Pose classification model using the collected data** to detect whether a person is doing the exercises correctly and suggest corrections accordingly.

**Hybrid Movie Recommendation systems**

- Started with **Knowledge based recommendations** that recommends movies based on movie genre.
- Created two **Content based recommendation systems**, the first one based on information about movie's cast and crew and the other one based on movie's plot.
- Created **User and Item based Collaborative Filtering recommendation systems**.
- Stacked content based recommendation and collaborative filtering models to build a **Hybrid movie recommendation system**.

## SKILLS

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- **Languages** : Python, C, C++, SQL
- **Tools/Technologies** : Git/GitHub, PyTorch, TensorFlow, Django, Tableau, ONNX, TensorRT
- **Areas of Interest** : Data Analytics, Data Science, Machine Learning, Deep learning

## POSITION OF RESPONSIBILITY

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**Publicity Senior Advisor at FMC Weekend '23(Annual Digital Arts Fest)**

- **Managed a team of 30 people** to propagate information regarding the fest to audience across India.
- Responsible for **designing a roadmap** for the team and ensuring smooth flow of operations.
- Achieved a **total footfall of around 500 participants** (including online and offline participations).