

Karan Anchan

M.Sc. Computer Science Student



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Residence Permit: §16b Student (Valid until 21.01.2028)

EDUCATION

M.Sc. Computer Science (Artificial Intelligence)

Albert Ludwig University of Freiburg (ALU)

Freiburg, Germany

Apr 2025 – Present

- Focus: Deep Learning, Probabilistic Graphical Models, Statistical Pattern Recognition, Robot Mechanics.

B.E. Computer Science

N.M.A.M Institute of Technology

Karkala, India

Sep 2020 – Aug 2024

- GPA: 9.33/10 (German Equivalent: 1,3).
- Coursework: Principles of Software Engineering, Algorithms, Machine Learning.

WORK EXPERIENCE

Machine Learning Intern

WiZdom Ed

Mangalore, India

Oct 2023 – Oct 2024

- Built a RAG-based search system using LangChain and ChromaDB for internal document retrieval.
- Improved data ingestion speed by 40% using recursive text splitting, making the search system more responsive.
- Developed a feedback loop using cosine similarity to monitor retrieval quality, reaching 90% accuracy in answers.
- Processed and managed a database of 5,000+ educational documents for automated student support.

TECHNICAL PROJECTS

3D Medical Image Segmentation (UNETR)

https://github.com/KaranAnchan/Unetr_3D_Abdomen_Segmentation

- Built a 3D segmentation pipeline using Vision Transformers (UNETR) for the BTCV dataset.
- Preprocessed DICOM/NIFTI files by applying Hounsfield Unit scaling to normalize internal organ visibility.
- Handled class imbalance using Dice-Cross Entropy loss, achieving a mean Dice score of 0.82 across 13 organs.

English-Hindi Translation Model (NMT Transformer)

<https://github.com/KaranAnchan/en-hi-nmt-transformer>

- Built a 43M-parameter Transformer encoder-decoder from scratch in PyTorch (no nn.Transformer), trained on 500k AI4Bharat Samanantar pairs.
- Implemented byte-level BPE tokenization, Noam learning-rate schedule with label smoothing, and length-normalized beam search (GNMT formula).
- Evaluated on a frozen 5,000-pair held-out test set, reaching 16.93 BLEU / 41.58 chrF++ / 71.41 TER; shipped a Gradio demo with live cross-attention heatmaps.

CERTIFICATIONS

Machine Learning Operations (MLOps) | Duke University

<https://coursera.org/verify/specialization/BC9VRBWCQRU5>

Machine Learning Specialization | Stanford & DeepLearning.AI

<https://coursera.org/verify/specialization/JDYYP28JPJNZ>

SKILLS

- Programming & Dev:** Python, C++, C, SQL, JavaScript, Docker, Git, AWS, CI/CD.
- Frameworks & Tools:** PyTorch, TensorFlow, MONAI, Transformers, LangChain, MLFlow, ONNX.
- Languages:** English (C2/Native), German (A2/Pursuing B1), Hindi (Native).

I hereby declare that the information provided above is true to the best of my knowledge and belief.

Freiburg im Breisgau, May 17, 2026

Karan Anchan