Kartik Chincholikar

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EXPERIENCE

FLAME University January 2024 – Present
Software Developer, Research Associate Pune, IN

- Design, implementation, and evaluation of a **workflow to digitize text from old Sanskrit Manuscripts.**
- Developing a custom **Data Annotation Tool** with support for multiple Indic languages
- Fine tuning and deploying Deep Learning Models based on **U-Net**, **CNN-LSTM** and **ByT5**

YouTube January 2020 – Present
AI Educational Content Creation (@Kartikc) Pune, India

- Gained recognition from Professors and leading AI Researchers from **Meta AI Research, the University of Waterloo, the University of Amsterdam, the University of Chicago and the University of Oxford**
- **Highlights**: Group Equivariant Neural Networks, Manifold Hypothesis, Statistical Learning Theory

Equitech Futures March 2022 – April 2023
Associate Researcher, Teaching Assistant Chicago, IL (Remote)

- **Identified risk factors** for chemotherapy-induced nausea and vomiting (CINV) in breast cancer patients
- Collaborated with domain experts and **enabled efficient distribution of expensive antiemetic medicines**
- Assisted students with data cleaning, EDA, data visualization and Bayesian modelling
- Evaluated the feasibility of AI solutions for various domain-specific problems

Badminton School September 2017 – January 2021
Founder, Coach Pune, India

- Taught the basics of Badminton on YouTube, reaching **2.5 million viewers** and garnering **34,000 Subscribers**
- Built an annotation tool, and derived insights **from sequential data of 40+ Badminton players**

PROJECTS

Workflow for Digitizing Handwritten Manuscripts

- Fine-tuned AI models for the tasks: **Image2Image**(UNet), **Image2Text**(CNN-BiLSTM), **Text2Text**(llama, ByT5)
- Design, development of **Data Annotation Tool**(PyQT, Vue) to collect data for the **Image2Text** task.

Group Equivariant Neural Networks

- Improved upon Patchcore-inspection (Industrial Anomaly Detection) using an Equivariant CNN to **encode Images into a Vector Database**, and then used **FAISS (Facebook AI Similarity Search)** to find anomalies
- Visualized and animated a forward pass through an Equivariant neural network architecture
- The resulting video was **acknowledged by leading researchers Taco Cohen (Meta AI Research), Gabriele Cesa (Qualcomm AI Research), and Erik Bekkers (University of Amsterdam)**

EDUCATION

Maharashtra Institute of Technology 2012 – 2016
BE Mechanical Engineering, First Class Savitribai Phule Pune University, India

- **Coursework**: Operations Research, Industrial Automation, Manufacturing, Materials Science, Numerical Methods

SKILLS

Machine Learning Stack : numpy, matplotlib, pandas, Scikit-Learn, PyTorch, Tensorflow, Hugging Face, fastapi
WebDev Stack : HTML, CSS, React, Vue, Github Actions
Tools : GCP, Google Storage, Vertex AI, Vision API, DocAI, GitHub, Notion, Adobe Photoshop, Davinci Resolve, Canva