

# Kartik Chincholikar

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## EXPERIENCE

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### 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, feature selection, **NLP(transformers/BERT/RNNs)** and Bayesian modelling
- Evaluated the feasibility of AI solutions for various domain-specific problems

### YouTube

January 2020 – Present

Creator (@Kartikc)

Pune, India

- Elucidated Machine Learning concepts using visualizations and simulations, **totalling 1300+ hours of watch time**
- **Gained recognition from Professors and leading AI Researchers** from Qualcomm AI Research, the University of Waterloo, the University of Amsterdam, the University of Chicago and the University of Oxford
- Implemented Machine Learning models from scratch with NumPy
- **Highlights:** [Group Equivariant Neural Networks](#), [Manifold Hypothesis](#), [Statistical Learning Theory](#)

### Badminton School

September 2017 – January 2021

Founder

Pune, India

- Built an annotation tool to collect the data from videos of Badminton players manually
- **Derived insights from sequential data of 40+ Badminton players** to find "Patterns of Play"
- Taught the basics of Badminton [on YouTube](#), reaching **2.5 million viewers** and garnering **34,000 Subscribers**
- Coached beginner and intermediate badminton players of all ages

## PROJECTS

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### 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 (Qualcomm AI Research), Gabriele Cesa (Qualcomm AI Research), and Erik Bekkers (University of Amsterdam)**

### Retrieval-Augmented Generation(RAG) chatbot

- Used open-source tools and AWS services to chat with PDF files in the Mental Health Domain
- Used a **Mistral LLM** deployed on Amazon SageMaker, **FAISS**, **LangChain**, **Hugging Face**, and Amazon TextTract

## EDUCATION

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### 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

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**Languages :** Python, SQL, Java, HTML/CSS, JavaScript

**Machine Learning Stack :** EDA, NumPy, matplotlib, pandas, Scikit-Learn, PyTorch, PyG, TensorFlow, Hugging Face

**Tools :** GCP, AWS, GitHub, Notion, Adobe Photoshop, Adobe Premiere Pro, Canva