KARTIK CHINCHOLIKAR

BIO

I love learning new things and meeting new people.Will get from point A to B using Google search and Chatgpt.

TOOLS:

Python Libraries:
numpy, tensorflow, pytorch, pytorch-geometric scikit-learn, matplotlib, pandas, conda

Other Technical Tools:
AWS Studio Lab, MATLAB, R, Java, Android Studio, AutoCAD, Ansys.

Adobe Creative Suite & More:
Photoshop, Premier Pro, Audacity, Canva,
Prompt Designing for Generative AI

Productivity:
Zotero, Notion, Obsedian, Discord

SKILLS:

- Strong fundamentals in Linear Algebra, Probability and Calculus.
- Ability to synthesise and communicate complex technical concepts clearly and concisely

EDUCATION:

BE Mechanical Engineering
Maharashtra Institute of Technology, Pune
First Class [2012-2016]

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EXPERIENCE

Equitech Futures [2022-2023]

- **Research Associate**

Worked with researchers from Oncology Department at the Kenyatta National Hospital on Breast Cancer patient data.
We **highlighted the risk factors** which make patients receiving chemotherapy more prone to nausea and vomiting (CINV)
Despite a small dataset size, the risk factors found **corroborate** with existing literature. I made a novel contribution to the *Inclusion Criteria* via a data cleaning procedure which make better use of domain knowledge.

- **Teaching Assistant**

I assisted students with their assignments about:
Python Foundations, Bayesian Modelling, and Data Visualization.
I had many insightful discussions on the *feasibility* of AI applications to various domains.

Machine Learning Storyteller [2020 - ...]

- **A Study of the Manifold Hypothesis**

I compiled everything which excited me about this in a video. The video featured twice on popular Youtube channel "Machine Learning Street Talk".

- **Simulations in Statistical Learning Theory**

Ran toy simulations to understand the need to use domain knowledge **to do feature engineering** and also **to choose a hypothesis class** *which is not too flexible, but flexible enough.*
Use of animation enabled easy exploration of topics such as the i.i.d assumption, PAC Learning, Feasibility of Learning, bias-complexity trade off, No-free-lunch theorem and the VC Dimension.
The resulting video was acknowledged by Professor Shai Ben David, who is a Professor of Theoretical Computer Science at University of Waterloo.

- **Visualizing mapping between Neural Network Layers**

Visualized the non-linear mapping between the input layer and hidden layer as the simple NN gets trained on the XOR toy dataset.

Badminton School [2018-2022]

- **Sports Analytics**

Made an annotation tool to manually collect the data of the badminton player to be analyzed.
Derived insights from the data to find common "Patterns of Play". These can be exploited during a match.

- **Advertising and Content Creation**

Started a Youtube channel teaching the basics of Badminton in Hindi, garnering 34k Subscribers.

SportShack [2016-2017]

- **Android Development**

Build an Android app which enabled runners to share screenshots with friends.

- **Gamification**

Designed a rating system to motivate runners be consistent.