

# Ketan Gangal

## Data Scientist

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📄 <https://github.com/ketangangal> 📺 YouTube 📍 Bengaluru, Karnataka

### PROFILE

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I have 2 years of work experience in Data Science with a proven ability and history of developing full-stack data science projects. Hands-on experience leveraging machine learning, deep learning, and transfer learning models to solve challenging business problems.

### SKILLS

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**Python** (Data structure and algorithms) | **Databases** (MongoDB | Mysql | Cassandra) | **Rest-API** (FastApi | Flask)

**Linux** (Ubuntu | Raspberrypi) | **Statistics** | **Machine Learning** (Scikit-learn | Dask) | **Deep Learning** (Pytorch | Keras)

**ML-Ops** (Docker | Mlflow | Prometheus | Grafana | wandb | Github Actions / CircleCi / Jenkins | Terraform | Paperspace | Aws)

**Natural Language Processing** (classification | summarization | generation | Name Entity Recognition | Transformers | RNN | LSTM | GRU.)

### WORK EXPERIENCE

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**iNeuron.ai**, Data Scientist 📧

2022 Jan – present | Bengaluru, India

- Leading a team of 5+ **Data scientists, Jr.Data scientists** in various Data Science Projects.
- Introduced and implemented **MLOPs methodology** for the first time in the organization using **MLFlow**, and **Github** actions.
- AI **consultancy** for other organizations and **professionals** on behalf of iNeuron Intelligence Pvt. Ltd.
- Worked as an **R&D member** and **took expert Lectures on mlops and Data Science in a batch of 1000+ Students.**

**Freelance**

2021 Nov – 2022 Feb | Remote

Financial product recommendation system.

- Created **Data Pipeline** on **AWS** to move data from Raw to a curated folder in the s3 bucket after **data quality checks**, and wrote model endpoint using **fastapi** for concept testing.
- Create Sagemaker notebooks for Data Science Team, and Presented **Architecture diagrams**.

**Capgemini**, Software Analyst

2021 Mar – 2022 Jan

- Worked on Oracle Finance & SCM modules as a techno-functional. Created Python Function for the client to update product information on the oracle database.
- Worked with SQL, Plsql, and Finance Functional Configuration along with BIP and OTBI reports.
- Created python Scripts for Excel Data mapping and reporting.

### PROJECTS

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**Reverse Search Engine**, Image Embeddings

2022 Sep – present

**Tech:** Python, **Resnet18**, Pytorch, **EC2**, **ECR**, **S3**, GitHub Actions MongoDB, **Docker**, **PaperSpace**.

- Designed a **Decoupled Microservice Architecture** for an Embeddings-based Image Search Engine which includes **CI/CD** for Data Collection, Model Training Pipeline, and model Prediction.
- Used **S3 bucket** as a **Data Store** and Granted Public Acl to images for Listing after prediction from Model Prediction endpoint.
- Selected **Resnet18** as embeddings Generator and **Annoy Algorithm** for finding nearest neighbors in **logn** time complexity.
- Utilized **GitHub actions** for Implementation of **host Controlled Continous Gpu Based Training** on paper space remote machine and used S3 bucket as Model Registry.
- Created **Lambda Triggers** as model Reloaders in a **Production environment** for model prediction endpoints.

**Deep Authenticator**, Image Embeddings (POC)

2022 Jul – 2022 Aug

**Tech:** Python, NodeMcu, Mongoddb, DeepFace, FastApi, **Docker**, ACR, App Services, **Terraform**, **Azure**.

- Designed API's **embeddings-based remote application** for a client to provide **permission-based access** to restricted areas.
- Selected **MTCNN** for face detection and **FaceNet** for Embedding generation along with MongoDB as a feature store.
- Used Fastapi as an interface for the model and checked similarly using Cosine Similarity.
- Implemented CI/CD in **monolith architecture** using GitHub actions and deployed the web application on App services on **Azure** cloud.

**Pipeline Standardization**, iNeuron Internals

2022 Mar – 2022 Jun

- We implemented a **machine learning** project code and deployment structure for all the upcoming projects.
- Implemented Google's MLOps **level 2 architecture** on Aws, Azure, and GCP.
- Introduced **Mlflow and weight & biases Experiment** Tracker for Experiment comparison and parameters tracking.
- Drafted **Mlops** Templates for clients and iNeuron internals.

## Container Vertical Text Detector

2022 Jan – 2022 Feb

**Tech:** Mlflow, Pytorch, Github actions, Image Processing.

- Designed and Developed a **web app to detect the vertical text** on a moving train using a slow-motion camera.
- Trained **YoloV4** on vertical images and obtained boundaries for text extraction.
- Utilized image processing techniques to Convert the **Vertical extracted** text into **Horizontal text**.
- Utilized **paddle Ocr** for image-to-text conversion.
- Deployed a web app on **AWS Ec2** with cloud watch monitoring.

## HACKATHONS

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**Simplified AI**, *Online machine Learning Platform (Hackathon with 2lacs Cash Price)*

Remote, India

**Tech:** SK-learn, Flask, Plotly, Aws, MongoDB, Docker, MongoDB, MySQL.

### Problem Statement:

- Design a **web portal** to **automate** the various operations performed in machine learning projects to solve specific problems related to supervised or unsupervised use cases.

### Solution Build:

- We build a **platform** where users can Perform **Exploratory Data** Analysis, **Data Preprocessing**, Feature engineering, Model training, Process scheduling, and custom scripting.
- The platform provides a solution with one click for any module, without writing a **single line of code**.
- Designed **automated and custom training sections for users**. With an option of injecting and exporting data to **multiple Cloud platforms**.

## EDUCATION

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**Jodhpur Institute of Engineering and Technology**,

2016 Aug – 2020 Dec | Jodhpur, India

*Electronics and Communication*

- Cumulative Percentage: 83.4
- Relevant Coursework : Image Processing , Signal Processing , Digital Electronics, Internet of Things, Neural Networks.

## AWARDS

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**University Merit Award**, *Rajasthan Technical University*

**Capgemini Innovative Ideas**, *Capgemini*

## CERTIFICATES

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Python | Machine learning

## INTERESTS

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Open Source | ML Community Meetups