

✉ kshitij.karthick@gmail.com

☎ +91-7795066036

📍 Bangalore, India

🌐 kshitij.cc

🌐 linkedin.com/in/kshitijkarthick

🌐 github.com/kshitijkarthick

🔧 SKILLS

Python Pandas
PySpark Pytorch
MLFlow ONNX
Sagemaker Databricks
Numpy SciKit-Learn
FastAPI Langchain
Flask Docker
Kubernetes MongoDB
Scala JavaScript
ReactJs HTML CSS

📖 PUBLICATIONS

IEEE
Establishing semantic relationships across languages using word vectors
6th October 2016
DOI:
10.1109/CSITSS.2016.7779382

🎓 EDUCATION

B.E, Computer Science and Engineering
Visvesvaraya Technological University
08/2012 - 06/2016
Bangalore, India

Kshitij Karthick

ML Engineer

7+ years experience as a Machine Learning and Software Engineer across companies in India and Germany, focusing on delivering large-scale data-centric applications and productionizing Machine learning applications at scale, be it building data pipelines, data versioning, automation of model training, alerting systems, and model development.

👜 WORK EXPERIENCE

● Senior Associate Data Science Publicis Sapient

05/2023 - Present Bangaluru, India
Client Albertsons - ML Platform Team

Achievements/Tasks

- Designed and Developed *Model Deployment Framework* to simplify deployment and scale, showcased in **DATA+AI Summit 2024**, San Francisco.
- Improved demand forecaster performance by **80.56%** (cold-start) by utilising *Model Deployment Framework* with Databricks Serverless.
- Developed data and model *Validation Framework* to ensure integrity is ensured with required alerting systems setup.
- Technologies: Databricks, MLFlow, Pytorch, Tensorflow, Python.

● Applied Scientist Zalando SE

06/2018 - 05/2022 Berlin, Germany
Europe's biggest online fashion platform.

Achievements

- Developed a time series forecasting model to predict sales for over **500,000** articles across **14 countries**.
- Designed and developed an ML experiment training platform to run traceable and **reproducible** experiments in parallel, increasing the **number of experiments** performed by **70%**.
- Developed a Spark training **data pipeline** to generate training data, which consumes over **800 GB / week** for sales forecasting.
- **Automated** ML training, **monitoring**, and backtesting for sales forecasting with alerts, reducing an applied scientist's manual maintenance effort from **6 hours/week to 1 hour/week**.
- Worked towards a company-wide initiative called 'ML Enablement' to **standardize** ML practices.
- Spearheaded the design and development of a **Regression model** for logistic cost prediction, achieving an accuracy of **82%**.
- Technologies: AWS Step functions, CDK, Sagemaker, Lambdas, Databricks, Pyspark, Pytorch, Python, Numpy, Docker, Grafana, and Kubernetes.

● Research Scientist Racetrack.ai

03/2017 - 03/2018 Bangalore, India
Chatbots for Real Estate and Customer Support using Artificial Intelligence.

Achievements

- Engineered a ML / NLP-based support ticket classification engine for Customer Service Bots with over **85% accuracy** using **Support Vector Machines**.
- Proposed and developed an **analytics pipeline** improving the chatbot experience, increasing the understanding of the customer to the **business**.
- Technologies: Elastic Search, Logstash, Kibana, Python, Docker, Docker compose, and Sklearn.



COURSES

LangChain with Python
Bootcamp (08/2024)
Udemy

Machine Learning Deep
Learning model Deployment
(08/2023)
Udemy

Essentials of MLOps with
Azure (07/2023)
LinkedIn Learning

Google Cloud Fundamentals
(07/2023)
O'Reilly Media - Janani Ravi

Prompt Engineering
(06/2023)
LinkedIn Learning

The Ultimate Flask Course
(11/2022)
Pakt Publication

Scaling Python for Big Data
(10/2021)
O'Reilly Media

Apache Spark with Python
(03/2021)
James Lee

Deep Learning (03/2019)
FastAI

Learn Scala (09/2018)
Zalando Tech

Deep Learning A-Z Hands on
Python in Data Science.
(09/2017)
Udemy

Machine Learning A-Z Hands
on Python in Data Science
(04/2017)
Udemy



CONFERENCES

Semantic Data & ML DevOps
(06/2019)
Berlin Machine Learning Group

Machine Learning meets
Fashion (12/2018)
Zalando Tech Events Berlin

3rd RecSys Berlin Meetup
(11/2018)
RecSys Berlin - GetYourGuide

India's Tryst with Artificial
Intelligence (01/2017)
Kstart, Bangalore

Functional Conference
(10/2016)
Bangalore



WORK EXPERIENCE

Product Engineer Jnaapti

07/2016 - 02/2017

Bangalore, India

Online learning platform with interactive programming courses.

Achievements

- Improved performance of a code evaluation system using multiprocessing by **400%**.
- Implemented an interactive system to explore and capture metrics on a Learner's journey through Jnaapti Virtual Coach.
- Delivered corporate training using the platform Jnaapti Virtual Coach for technologies like Python, Java, and Web for over **200 participants**.
- Technologies: Web2Py, Python, MongoDB, Docker, ReactJS, and JavaScript.



PROJECTS

ProJPG (05/2020 - 10/2020)

- Enhance cartoon/animated image quality and resolution using an UNet ML model.
- Trained on a 42GB image dataset to increase the image resolution by over 100% while reducing pixelation and blur effects.
- Technologies: Pytorch, FastAI, Python, FastAPI, Redis, VueJS, and Vuetify.
<https://projpg.kshitij.cc/>

Animewreck (02/2019 - 05/2021)

- Recommend tailor-made shows to watch based on the user's past watch history.
- Visualize and explore the embedding space to find other similar shows represented in a 3d force graph.
- Technologies: Pytorch, FastAI, Python, FastAPI, Redis, VueJS, and D3.js.
<https://animewreck.kshitij.cc/>

Urban Data Visualization (05/2016 - 06/2016)

- Visualize Bangalore on the map while providing insights into the number of parks, public transportation, public toilets, and criminal cases.
- Awarded 1st place as part of a 24 hour hackathon, with a team of 5 members.
- Technologies: Leaflet, HTML, CSS, Js, Semantic-UI, Yeoman, C3.js, Git, Python, CherryPy, Openpyxl, Numpy, and Sklearn. <https://udv.kshitij.cc/>

Tvecs (02/2016 - 06/2016)

- The system learns a linear transformation between multidimensional word vector spaces of English and Hindi without using parallel corpora.
- Generate semantically similar words across languages using Word2Vec embeddings.
- Technologies: Python, CherryPy, Nltk, Numpy, Sklearn, Scipy, Pytest, HTML, CSS, JavaScript, and SigmaJs. <https://tvecs.kshitij.cc/>



HONORS / AWARDS

National Level Hackathon

Reva University - 2023, 2019, 2017, 2016

- Invited as a judge for the 24-hour National Level Hackathon organized at Reva University.

ML & Data Analysis workshop

Reva University - 2019, 2018

- Conducted an ML & Data Analysis workshop for college students to pick up the fundamentals of Machine Learning and learn to use the tooling needed for data analysis.

Hacktoberfest Challenge

Digital Ocean - 2017, 2016

- Completed the opensource Hacktoberfest challenge.

Inter College 24 hour Hackathon

Reva ITM - 2016

- Awarded 1st place for Urban Data Visualization with a team of 5 members.

National Students Project Exhibition

AICTE CSE - 2016

- Awarded 1st place for T-Vecs project of team size of 4.