



# Deepak T. Ahire

MACHINE LEARNING ENGINEER, HELPSHIFT AI · EX - SOFTWARE ENGINEER, MICROSOFT INDIA R&D  
☎ (+91) 9757185363 | ✉ ahiredeepak20@gmail.com | 🏠 <https://adeepak7.github.io/> | 📄 Deepak Ahire | 📺 adeepak7

## Respected members of the recruitment team,

With a cumulative experience of 4 years, I am actively seeking fresh opportunities in the domains of Machine Learning, MLOps, and Python development.

I have strong knowledge of mathematics required for machine learning.

I secured **AIR 1** in the NPTEL's Jul-Oct 2022 session course "Essential Mathematics for Machine Learning" offered by IIT Roorkee. Check "Toppers list" on <https://nptel.ac.in/courses/111107137>.

Also bagged **AIR 1** in the NPTEL's Jan-Apr 2023 session course "Introduction to Machine Learning" offered by IIT Madras. Check "Toppers list" on <https://nptel.ac.in/courses/106106139>.

At Helpshift, I gained experience on how to design an end-to-end ML solution:

1. Creating data ingestion pipeline.
2. Model training.
3. Writing fast and lightweight inference services.
4. Scaling inference services and maintaining the latency SLO.
5. Versioning models using MIFlow.
6. Migration of legacy ML models on MIFlow without downtime.
7. Carrying out python upgrade for services, its dependencies, and loading older models with upgraded libraries/python.
8. Carrying out benchmarking to choose apt cloud instances to run the heavy ML data generation and training workflows.

I passed the toughest certification for Data Structures and Algorithms, known as CCDSAP Advanced, offered by Codechef, India.

I am the inventor of the Kth max sum pair algorithm which was cited to cluster new mutations of SARS Covid-19 virus.

For further information about me, please find my CV on the next page, and do browse my LinkedIn profile to check what my peers have to say about me.

Sincerely,

**Deepak T. Ahire**

## EDUCATION

### SHIVAJI UNIVERSITY

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING  
Aug 2014 - May 2018 | Sangli, India  
Major GPA: 9.69 / 10.0. Gold Medalist - 2018

## LINKS

LinkedIn:// [Deepak Ahire](#)  
Portfolio:// [adeepak7.github.io](#)  
Stack Overflow:// [Deepak Ahire](#)  
Kaggle:// [@adeepak7](#)  
Github:// [@adeepak7](#)  
ACM ICPC:// [ACM ICPC ID](#)  
CodeChef:// [@adeepak7](#)  
Hackerrank:// [@ADEepak](#)  
ORCID:// [0000-0002-9174-0797](#)  
Analytics India Magazine:// [Deepak Ahire](#)

## CERTIFICATIONS

- [1] Introduction to Machine Learning, IIT Madras (Verify)
- [2] Essential Mathematics for Machine Learning, IIT Roorkee (Verify)
- [3] CodeChef Certified Data Structure & Algorithms Programme (CCDSAP) - Advanced Level. (Verify)
- [4] CodeChef Certified Data Structure & Algorithms Programme (CCDSAP) - Foundation Level. (Verify)
- [5] RabbitMQ Training Course by CloudAMQP (Verify)
- [6] ACM International Collegiate Programming Contest ID. (Verify)
- [7] Hackerrank Skills Certification - REST API - Intermediate Level. (Verify)
- [8] Hackerrank Skills Certification - Problem Solving - Intermediate Level. (Verify)
- [9] Hackerrank Skills Certification - Java - Intermediate Level. (Verify)
- [10] Hackerrank Skills Certification - Node.js - Intermediate Level. (Verify)
- [11] PCEP Certified Entry-Level Python Programmer. (Verify)
- [12] Introduction to Statistics (ST0050). (Verify)
- [13] LaTeX for Students, Engineers, and Scientists. (Verify)
- [14] Hackerrank Skills Certification - Javascript - Basic Level. (Verify)

## MOST VOTED ANSWERS

### @ STACK OVERFLOW

- [1] Applications of dynamic programming in real world programming. (Read)
- [2] Minimum edge in a set of edges which connects a graph. (Read)
- [3] C/Linux: How to find the perfect number of threads to use, to minimize the time of execution? (Read)
- [4] Configure Azure deployment for Service Fabric. (Read)
- [5] "Stable" k-largest elements algorithm. (Read)
- [6] Inconsistency in determining directed graph's back edges via DFS. (Read)
- [7] Trying to create a multithreaded program to find the total primes from 0-100000000. (Read)
- [8] How to rotate in red black tree. (Read)
- [9] Merge Sort vs Quick Sort Implementation. (Read)
- [10] Bellman Ford Implementation and simultaneously relaxation. (Read)
- [11] About two threads alternately printing odd and even numbers. (Read)
- [12] "ERROR: py37: InterpreterNotFound: python3.7" when running tox from github. (Read)
- [13] Why actual runtime for a larger search value is smaller than a lower search value in a sorted array? (Read Question)

Read more on my [Stack Overflow Profile](#)

### TECHNOLOGIES EXPLORED

MLflow, Tensorflow, RabbitMQ, Python3, C/C++, Java, Node.js, tox, Clojure, Microsoft Azure, Microsoft Service Fabric, Power BI, REST-API, S3, WebRTC

### EXTRACURRICULAR ACTIVITIES

Kindly check the sections - "Community Service/Outreach", "Mentorship", and "Technical Events Moderated" on my portfolio website - <https://adeepak7.github.io>.

## RESEARCH

### ALGORITHMS LAB | COLLABORATIVE RESEARCHER

Jan 2020 - May 2021 | Walchand College of Engineering, Sangli, India  
Worked with the Algorithms Lab investigator Prof. Kiran Kamble (now Data Scientist at Coditation Systems) to develop novel algorithms that have real life use cases in e-commerce, supply chain, and transportation industry. See [Publications](#) section for my published/accepted articles.

## EXPERIENCE

### HELPSHIFT INC | MACHINE LEARNING ENGINEER

Artificial Intelligence team | January 2022 - Present | Pune, India

- [1] Enabled the Smart Intent suggestions service/feature for new customers.
- [2] Experience in building Siamese Neural Network to optimise the embeddings used for classification using Tensorflow.
- [3] Optimised ML pipeline that saved over 5000 minutes of AWS EC2 compute time.
- [4] On-boarded Smart Intents feature production ML pipeline on the MLflow platform, and carried out migration of the existing production ML models from S3 to MLflow platform without downtime.
- [5] Carried out python version and package upgrade of the ML backend services.
- [6] Implemented "Smart Alerts" - An end-to-end ML feedback pipeline for the Smart Intents ML models based on the end-user's interactions.
- [7] Analysed the results generated by the ensemble of three techniques/algorithms used in the FAQ suggestion service and optimised it by removing the non-performing algorithm. Harnessed python's LRU cache to improve the service's SLO latency from 90% to 99%.

### MICROSOFT INDIA R&D | SOFTWARE ENGINEER

Core Platform Engineering team | June 2018 - Sep 2019 | Hyderabad, India

- [1] Enhanced log management of Microsoft Supply Chain Microservice Framework, and developed centralized telemetry reports using Power BI with alerting mechanisms.
- [2] Was responsible for the test-driven development of microservices with end-to-end functional test automation.
- [3] Developed Application Insights scripts to monitor the SLA in production environments.
- [4] Designed a notification service to process the service orders created against Microsoft hardware devices with payment on-hold status.
- [5] Developed a Scrap Evidence collection tool to avoid fraud service orders which saves \$10 Million/year for Microsoft Device Sales.
- [6] Designed a plug and play Task Group for Azure Devops build pipelines for maintaining code quality, code coverage, and minimum required artifacts.

## PUBLICATIONS

- [1] [MLFlow in production at Helpshift](#)  
[Deepak Ahire](#), [Shyam Shinde](#).  
Helpshift Engineering (Medium publication), November 2022.
- [2] [Finding all Edges on any Smallest Route connecting two nodes of a Directed Acyclic Graph using Parallel Computing](#)  
[Deepak Ahire](#), [Kiran Kamble](#), [Omkar Jadhav](#), [Shubham Katakdhond](#).  
Proceedings of the 9th International Conference on Innovations In Computer Science & Engineering (ICICSE), 2021, Hyderabad, India.
- [3] [Finding the Kth Max Sum Pair in an Array of Distinct Elements using Search Space Optimization.](#)  
[Deepak Ahire](#), [Smriti Bhandari](#) and [Kiran Kamble](#).  
Proceedings of the 8th International Conference on Innovations In Computer Science & Engineering (ICICSE), LNNS, Springer Singapore.
- [4] [Commentary - Methods to find all the edges on any of the shortest paths between two given nodes of a directed acyclic graph.](#)  
[Deepak Ahire](#), [Omkar Jadhav](#)  
Research Ideas and Outcomes 7: e68600, May 2021.
- [5] [An Autonomous Intelligent System to Leverage the Post Harvest Agricultural Process using Localization and Mapping](#)  
[Amitash Nanda](#), [Deepak Ahire](#)  
Proceedings of the International Conference on Intelligent Systems and Sustainable Computing (ICISSC) 2021, Hyderabad, India.
- [6] [Video Over Intranet \(VDOIT\).](#)  
[Deepak Ahire](#).  
Research Ideas and Outcomes 6: e58504, September 2020.
- [7] [Why Has The Number Of Combo Recommendations Decreased On E-commerce Platforms?](#)  
[Deepak Ahire](#).  
Analytics India Magazine, September 2020.

## PROJECTS (MORE ON GITHUB)

- [1] [Speech To Code](#) (Microsoft LEAP Hackathon 2018) - This project aims to help physically challenged people who are passionate about programming so that they can code and contribute to the society. (Github) (Youtube)