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Top Skills

Keras
Machine Learning Monitoring
MLOps

Languages

Punjabi (Native or Bilingual)
English (Professional Working)
Hindi (Native or Bilingual)

Certifications

Getting Started with AWS Machine Learning

Deep Learning Fundamentals Certification

Parallel, Concurrent, and Distributed Programming in Java Specialization

Statistical Learning

Introduction to Programming in C, Organised by IIT Kanpur

Honors-Awards

Star of the Quarter

Best Achiever of the Year

Pardeep Singh

Lead Machine Learning Engineer at Fairmatic
Bengaluru, Karnataka, India

Summary

I'm a Machine Learning Engineer who is passionate about applying technology to solve real-life problems. Right now, I'm working on the AI-based Insurance scoring models at Fairmatic. During my free time, I always seek to enhance my knowledge by enrolling in online courses, participating in meetups, and doing side projects.

My areas of interest involve Applied Machine Learning, Distributed and Big Data Systems.

Skills: Python, Clojure, Java, MongoDB, Postgres, MySQL, ElasticSearch, Scikit Learn, Pytorch, Data Analysis, Kafka, Hive, PySpark, Django, Redis, Docker, Streamlit, Redshift, AWS

Github: https://github.com/pardeep-singh/
Kaggle: https://www.kaggle.com/pardeep19singh

Experience

Fairmatic
Lead Machine Learning Engineer
April 2022 - Present (2 years 6 months)
Remote

- Joined the team during stealth mode and became the Subject matter expert on Risk models used to assess insurance risk. Lead Multiple projects in this area.
- Proposed an architecture to deploy models to productions. Performed two extensive POCs using Qwak and MLFlow. Choose MLFlow based on a comparison with Qwak and Sagemaker. This will reduce the time we take for moving models from research to production by 80%.
- Proposed a solution to fix existing version of the models. I was responsible for the end-to-end implementation along with an extensive evaluation to ship this change to production.

- Implemented a feature to identify the areas of improvement for different drivers to help them make safer drivers. Used ensembled tree based solution to identify such factors. Improved the accuracy of this feature in the next iteration by 10%(from 86% to 96%) by using a deterministic Non ML-based solution.
- Lead the efforts to benchmark existing Risk Models. This work enabled the team to identify shortcomings of current models and devise a plan to overcome them in the next version of Risk Models.
- Implemented a Streamlit-based dashboard to monitor Risk Models. This reduced the time taken to debug model issues from days to hours.
- Productionized the new version of Risk models. Along with implementation, I did the end-to-end impact analysis of new models on Insurance books.
- Responsible for hiring new team members across Senior Software, Machine Learning Engineer, and Data Scientists roles.
- Organizer of weekly technical talks for the Engineering Team. Organized over 15+ sessions so far.
- Mentored 3 new joiners by becoming their buddy for the first month of joining the team.

Sense
1 year 5 months

Lead Machine Learning Engineer
May 2021 - March 2022 (11 months)
Remote

- Rearchitected the Chatbot System and removed the overhead of training models for deploying new chatbots. This used to take 1 hour per chatbot and it was reduced to less than 1 minute with this.
- Responsible for hiring new team members by taking technical interview rounds like coding, and system design rounds for Machine Learning Engineer, Software Engineer roles.
- Onboarded 2 new team members by becoming their buddy for the first month of joining the team.

Machine Learning Engineer
November 2020 - May 2021 (7 months)
Remote

- Working on the Conversational AI assistant used to prescreen the candidates and enhance the candidate's information in the Applicant Tracking System.

- Worked on implementing the automated model training and deployment pipeline. This pipeline reduced the time taken to deploy a new chatbot from 3-4 days to 1 hour.

Helpshift
4 years 6 months

Software Engineer II: Machine Learning
September 2019 - November 2020 (1 year 3 months)
Pune, Maharashtra, India

- Worked on multiple NLP based products like Issue classification, FAQs suggestions, Language detection
- Delivered a Django application to perform clustering on customer support tickets. Using this tool CSM team was able to fulfill these requests within 1-2 hours whereas it used to take 3 days earlier as it was done manually by the Data Science team.
- Created a roadmap for implementing a Machine Learning Platform to perform end-to-end experiments. Implemented a python library using PySpark for pulling data from Hive, MongoDB, Postgres as part of the initial phase.
- Implemented a Django application for training and serving classification models.
- Improved the preprocessing library by addressing discrepancies in various steps and standardizing the preprocessors used in multiple projects.
- Conducted a Machine Learning Series covering the concepts used to build AI systems by the Data Science Team.
- Started BI-Weekly Technical sessions where we covered topics like Consistency in Microservices architecture, Event sourcing pattern, CQRS, Demystifying transactions.

Software Engineer I: Backend
June 2016 - September 2019 (3 years 4 months)
Pune, Maharashtra, India

- Worked on multiple iterations of the rule-based Chatbot system. Addressed the system bottlenecks and improved the system throughput by 10 times. This system handled 300million conversations in 2019.
- Implemented the Backend REST API Service used by the WebChat client for handling communication between end-users and customer support agents.
- Worked on multiple Third-Party integration products like REST APIs, Salesforce
Integration, Zendesk Integration, Webhooks, Billing System.

- Made multiple optimizations in REST APIs Service and Webhook system to improve the throughput. One of the optimisation in heavily used API reduced the latency from over 10 seconds to less than 1 second.

Paxcel Technologies Pvt. Ltd.

1 year 5 months

Software Engineer
July 2015 - May 2016 (11 months)
Sahibzada Ajit Singh Nagar, Punjab, India

- Implemented a Sentiment Analysis Engine for analyzing Customer Product reviews.
- Worked on a client project with a goal to improve the efficiency and reliability of the systems used to manage the lifecycle of WordPress sites.
- Performed R&D on container tools like Docker, Kubernetes, Docker Compose, Shipyard for a customer project.

Trainee Software Engineer
January 2015 - June 2015 (6 months)
Sahibzada Ajit Singh Nagar, Punjab, India

- Added new features like AWS EC2 support, remote logging to open source project(Boxupp) used to launch virtual machines.
- Implemented an automated build and deployment tool as a POC which was used to onboard a customer.

Education

Indian Institute of Science (IISc)
Advanced Certification Programme in Deep Learning Foundations and Applications, Computer Engineering · (April 2024 - May 2025)

Thapar Institute of Engineering and Technology
Master of Computer Applications (M.C.A.), Computer Science · (2012 - 2015)

Panjab University
Bachelors in Computer Applications, Computer Science · (2009 - 2012)