

## EDUCATION

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**New York University | New York, USA**

Sept 2021 - May 2023

MSc Computer Engineering

GPA: 3.5

Relevant courses: Machine learning, Deep learning, Big data, Decision Models and Analytics, Network Security

**Bharati Vidyapeeth's College of Engineering | Delhi, India**

Aug 2016 - Sept 2020

Btech Information Technology

GPA: 3.4

## TECHNICAL SKILLS

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**Languages:** Python, R, C/C++, JavaScript, Git, Linux, HTML/CSS**Packages and Libraries:** NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, PyTorch, TensorFlow, Keras, dplyr, NLTK**Tools and Frameworks:** React.js, Ruby on Rails, Tableau, MS Excel, Amazon Web Services(AWS), Google Cloud Services(GCP)**Databases:** SQL, PostgreSQL, Hadoop, PySpark, DynamoDB

## PROFESSIONAL EXPERIENCE

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**New York University | Course Assistant | New York, USA**

Sept 2022 - Present

- Graduate Teaching Assistant for the Deep Learning Fall'22 course and Computer Networking Spring'23 course.
- Assisting students with queries regarding lectures, and assignments via weekly office hours in addition to grading assignments.

**Data Glacier | Data Science Intern | New York (Remote)**

June 2022 - Aug 2022

- Developed a search engine that ranks unstructured text documents based on semantic & contextual relationships to user prompts.
- Proposed and built an ensemble of BERT & TF-IDF on MS Macro dataset, achieving MAP of 82.3%.

**Sapio Analytics | Machine Learning Engineer | Maharashtra, India (Remote)**

July 2020 - Jan 2021

- Designed a Job-search portal using TensorFlow that maps the skill set of laborers(users) with those of industry requirements across Pan-India to help them with blue-collar jobs during covid. Deep-KNN was used as a matching algorithm.
- Analyzed Tableau reports and dashboards of over 20M records using PySpark ETL scripts to understand the supply chain.
- Built deep k-NN models on demand-supply insights with Batch Normalization & Dropout that improved accuracy to 85%.
- Collaborated with the software team to integrate TensorFlow model with frontend using ReactJs to display analysis and matches.
- Initiated web application for the Govt. of India to provide 1M blue-collar jobs to Indian migrant laborers.

**inDDev | Software Developer Intern | Haryana, India**

June 2019 - July 2019

- Designed and implemented the frontend and backend architecture of a Content Management System(CMS) using Ruby on Rails.
- Implemented version-controlled environment in CMS; allows the admin to safeguard any changes and roll back when necessary.

## PUBLICATION

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Paper titled '**An Integrated System for Occupational Category Classification based on Resume and Job Matching**' published in *International Conference of Data Analytics & Management, Springer, June 2020* (**paper**)

## PROJECTS

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**Movie Recommendation System (Python, PySpark, SQL)**

- Studied over 27M records of movie-user information, clean data in PySpark, and leveraged Python-Seaborn to plot graphs.
- Implemented a baseline collaborative filtering movie recommendation model using Spark's ALS method to recommend top 10 movies based on movie genres, implemented and compared baseline model results with Python libraries LightFM and Annoy.
- Tested each model for overall performance using accuracy metrics like precision at k, NDCG, MAP, and RMSE.
- Single-machine implementation performed better than the ALS method with a test MAP of 0.057 and 145.12sec to fit the model.

**Dialogue-based Interactive Facial Editing via Reinforcement Learning (Python, PyTorch, NLP)**

- Developed a dialogue-based facial editing system using reinforcement learning that allows users to specify the desired facial editing effect in a natural language and interactively accomplish the goal via multimodal dialogue with system feedback.
- To track user intention and maximize user's long-term rewards; employed policy gradient-based algorithm REINFORCE.

**Plasma Desk web app (ExpressJs, HTML/CSS, Firebase, AWS - ElasticSearch, Heroku)**

- Developed Js web app, driven by doctors, that connects an eligible plasma donor with a Covid patient, based on compatibility.
- The project won the **Best Medical Hack** and **Wolfram Award for Top 30 hacks** in MHacks 13 Beta Hackathon 2020.

## ACHIEVEMENTS

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- **Vice President** at NYU Machine Learning Club Jan 2023
- **100% grant recipient** for attending **Strange Loop Conference'22** in St. Louis, Missouri Sept 2022
- **3rd position** in CSAW'21 Cyber Security Games & Conference Hack3d competition. Nov 2021