

Nirbhay Tandon

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TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL

Libraries: TensorFlow, Pandas, Rasa, NumPy, Scikit-Learn, Matplotlib, Jest, Enzyme, ReactJs

Business Skills: Teamwork, Leadership, Mentoring, Client/Business Expectation Management

Additional Skills: AWS SageMaker, OmniAI, Natural Language Processing, Exploratory Data Analysis, Hypothesis Testing, Machine Learning, Scrum, Agile, Continuous Integration/Continuous Development, DevOps, Jenkins, Spring Boot

EXPERIENCE

Sr. Software Engineering Associate

Jan. 2021 – Present

J. P. Morgan Chase & Co.

London, United Kingdom

- Deployed AWS Sagemaker trained Recommendation Models to AWS using proprietary JP Morgan Machine learning platform & established connectivity using AWS API Gateway
- Authored Tech Primers on deploying Machine Learning models created in proprietary JP Morgan Machine Learning platform to AWS SageMaker with API Gateway endpoints
- Collaborated with Data Science teams to deliver on Recommendations based document recommendation engine
- Led various negotiations between global stakeholders that resulted in delivering flagship products before the deadline
- Designed various components like Bulk-Delete, Quick Search etc. for a low-latency client subscription portal using ReactJs, Apollo, GraphQL & Elasticsearch
- Designed Spring-boot 2 based data migration service for migrating RIXML based subscriptions to JSON format for over 6 million subscriptions under 1 hour
- Created weekly coverage reporting service to generate a report on active client data using Spring boot 2, Spring Batch, sybase
- Architected various Micro-services & simplified ETL pipeline for internal & external clients
- Completed Leadership Excellence programmes within J.P. Morgan for future Team Leads
- Lead a 7 member graduate developer team for a social good project for 10 months

Software Engineering Associate

Jan. 2019 – Dec. 2020

J. P. Morgan Chase & Co.

Glasgow, United Kingdom

- Developed a full-stack web application using React, MaterialUI, Java and GraphQL for external ans well as internal clients to read, share, manage and interact with Research published by JP Morgan Analysts
- Introduced the team to Jenkins & BitBucket based CI/CD SDLC, Scrum methodologies & Kanban
- Successfully migrated legacy applications over to the company proprietary CI/CD tool & enabled adoption for 16 other applications

Technology Analyst

Aug. 2016 – Jan. 2019

J. P. Morgan Chase & Co.

Glasgow, United Kingdom

- Complete SDLC for a ReactJS & Java based web application that replaced a legacy application
- Developed a standalone Spring Boot application for reporting client positions for one of the largest Prime Brokerage clients for JP Morgan
- Worked as *Client-Lead* in a 13 member team. We used Angular & Microsoft Azure to build and deploy a highly scalable web applications for one of our member charities
- Contributed towards improving the overall test coverage for Spring based web application and brought it up to 96% for unit test coverage using JUnit. I also worked on Selenium test cases for fully automated UI testing

Systems Programmer

Dec. 2015 – Mar. 2016

Vox Sciences

London, United Kingdom

- I was responsible for managing the existing application. I also developed the new deep-learning based speech recognition using C++

EDUCATION

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| Liverpool John Moore's University <i>Master of Science in Data Science</i> | Dec. 2019 – Jul. 2021 <i>Grade: Distinction</i> |
| King's College London <i>Master of Science in Robotics</i> | Aug. 2014 – Apr. 2016 |
| J.S.S. Academy of Technical Education <i>Bachelor of Technology in Information Technology</i> | Aug. 2010 – Jun. 2014 |

THESES & PERSONAL PROJECTS

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| Transformer Architecture for QnA Master's Thesis <i>Python, NumPy, SciPy</i> Github | Dec. 2020 – Aug. 2021 |
| <ul style="list-style-type: none">Proposed & implemented improvements to the existing Transformer Architecture by using Answer-Pointer layersBenchmarked against existing state-of-the-art architectures like BERT, RoBERTa, DistilBERT & ALBERT to show performanceRan experiments around SQuAD 2.0 dataset and achieved F1 score of 0.74 | |
| Question Answering System Using BERT Capstone Project <i>Python, NumPy, SciPy</i> Github | Dec. 2020 |
| <ul style="list-style-type: none">Question Answering System using DistilBERT architecture & SQuAD 2.0 DatasetTraining loss dropped from 12.0271 to 1.8473 in the final epochThe validation loss dropped from 2.0035 to 0.0196The fine-tuned model scored an F1 score of 0.87, after 20 epoch | |
| Deep Learning for Speech Recognition Master's Thesis <i>Python, NumPy, SciPy</i> | May. 2015 – Dec. 2015 |
| <ul style="list-style-type: none">Developed a Speech Recognition system using Long Short-Term Memory architecture of recurrent neural networksThe project achieved 99.93% accuracy on a 40-memory cell network | |
| Viterbi Part Of Speech Tagger <i>Python, NumPy, SciPy, NLTK</i> Github | Oct. 2020 |
| <ul style="list-style-type: none">Implemented vanilla Viterbi Part of Speech tagger & assessed its accuracy(75%)Modified Viterbi algorithm using transition probability and emission probabilityTested the developed models on sample data and achieved an 22.81% higher accuracy with a modified Viterbi Algorithm(92.28%)Correctly identified and tagged words missed by the vanilla Viterbi tagger | |
| Lead Score Case Study <i>Python, NumPy, SciPy</i> Github | Jun. 2020 |
| <ul style="list-style-type: none">Performed extensive Exploratory Data AnalysisDeveloped various Logistic Regression models. The optimal model had 80% Accuracy, Precision & RecallGenerated a 'Lead Score' value. Higher the lead score, higher the chances of conversion for the company | |
| Telecom Churn Case Study <i>Python, NumPy, SciPy, EDA</i> Github | Aug. 2020 |
| <ul style="list-style-type: none">Performed extensive Exploratory Data Analysis, worked with derived columns & data inference techniquesIdentified key factors that cause a customer to churnDeveloped multiple models using ADABOOST, XGBoost, Random Forest & Logistic Regression with PCA. The best model was a PCA & XGBoost Classifier after Hyper-parameter tuning that achieved 80% sensitivity & 90% recallProposed business strategies & improvement | |
| Help International - Poverty Analysis <i>Python, NumPy, SciPy</i> Github | May. 2020 |
| <ul style="list-style-type: none">Implemented extensive Exploratory Data AnalysisImplemented Silhouette & Elbow analysis to decide cluster sizesUsed K-Means clustering with Hierarchical Clustering techniques to determine which countries need the most assistanceIdentified key features for the NGO to focus on & top 5 countries to target immediately | |