

Jay Bhanushali

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During my time at American Express, I developed Machine Learning powered Services and production level code using python, spark to create direct impact on real world systems. A few highlights include:

- Developed ML models to transform search engine to fetch better search results enabling easier discovery of data for internal employees, hence improving user experience.
- Designed backend and build models for Personalized Recommender system used by 5000+ internal employees improving their user experience.

In my next role, I would like to continue building on my experience with building Large Scale applications powered by Machine learning models.

+ Technical Skills

Languages:	Python, SQL, Shell scripting
Frameworks:	PySpark, Scikit-learn, Flask, Pandas, NumPy, Nltk, Spacy, XGBoost, Fbprophet, TensorFlow, Pytorch etc.
Technology:	Unix, Git/Bitbucket, Docker, Jenkins, XLR, JMeter, SonarQube, Rally, Jira, Tableau, Hadoop
Databases:	MySQL, Hive, Teradata, Oracle
Coursework:	Data Structures and Algorithms, Machine Learning, Deep Learning, Natural Language processing, Time Series Analysis, System Design and Architecture, Software Engineering principles.

+ Experience

Machine Learning Engineer | Data Scientist, *American Express*

February 2020 – Present

- Build pipeline for data preprocessing, evaluation and model building for a recommender system using frameworks like PySpark, scikit learn, NumPy, pandas.
- Designed a Flask API and deployed the model in container – based system like docker and Kubernetes for increased scalability while reducing the chance of failure.
- Established a CI CD pipeline using Jenkins to establish a consistent, automated way to build, package and test changes.

Machine Learning Engineer | Data Scientist, *American Express*

July 2019 – February 2020

- Developed end to end pipeline to serve models for personalized of content on AMEX website for prospect acquisition.
- Used Spark to automate the whole process of data retrieval, preprocessing, model building and report generation.
- Pipeline lead to 400% increase in data ingestion vs previous python pipeline, taking in 4MM rows and 30k features.
- Prepared modules for hyper-parameter tuning for optimizing the XGBoost model and built custom evaluation metrics.
- Documented scripts, performed unit testing and UAT to ensure the models are deployed properly accurately.

Graduate Tutor – Machine Learning and Operation Research, *Arizona State University*

May 2018 – May 2019

- Tutored over 1000 undergraduates in the subject of Information systems and Machine learning using Python.
- Taught the students to build Relational Databases, perform optimization and then retrieve data from them using SQL.

+ Education

▪ M.S. in Industrial Engineering , Arizona State University, Az	GPA: 3.8/4.0	2017 - 2019
▪ B.S. in Mechanical Engineering , K.J. Somaiya College of Engineering, India	GPA: 8.0/10	2013 - 2017

+ Awards

Champions Achievers Club Award – 2020 (Contribution of various ML micro services)

+ Academic Projects

Explainable AI for Classification of Genetic variations with Natural Language Processing of Research Papers – Kaggle

- Used techniques like down sampling and Upsampling (SMOTE) to deal with class imbalance and build ML models.
- Focused on explainability of the predictions of complex models built using libraries like LIME, EPI5, SHAP.

Customer Churn Analysis Using SQL & Tableau – *dognition.com*

- Used complex SQL queries to get data and make fields from Teradata database where dognition had stored its data.
- Used software's like Tableau to visualize data and making dashboards to identify key factors affecting churn rate.