

Kshitij Zutshi

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EDUCATION

Northeastern University, Boston, MA

Expected May'23

Master of Science in Information Systems

Relevant courses – Advances in Data Science & Architecture, Big Data Systems & Intelligence Analytics

Amrita Vishwa Vidyapeetham, India

May 2018

Bachelor of Technology in Electronics & Instrumentation Engineering

Relevant courses – OOPs, Soft Computing, Image Processing, Digital Signal Processing

TECHNICAL SKILLS

Programming Languages: Python, SQL, Java, JavaScript

Packages & Libraries: NumPy, Pandas, Seaborn, Scikit-learn, Matplotlib, Jupyter Notebook, Google Collab, Tableau

Statistics/Machine Learning: Statistical Analysis, Exploratory Data Analysis, Data Modeling, Predictive Modeling, Regression, SVM, Random Forest, Decision Tree, GBM, XGBoost, Regularization, Model interpretability, SHAP values, Supervised & Unsupervised Learning

PROFESSIONAL EXPERIENCE

Squark AI, Boston, Massachusetts

Graduate Research Assistant (Northeastern University)

Jan'22 – Present

- Productionized code to perform model-based *data Imputation* using K- Nearest Neighbors and Multiple Imputation by Chained Equations (MICE) algorithms for large-scale customer analytics datasets thereby improving model predictions by 25%

Newton School, Chennai, India

Operations Analyst

June'21 – Aug'21

- Modeled student performance data using H2O's AutoML to get the best model in – Decision Tree, Random Forest, GBM and increase placement of student prediction in Q3 2021 by 33 percent

WebileApps India Pvt. Ltd., Chennai, India

Senior JS Frontend Engineer

June'20 – June'21

- Developed DIGIT (Digital Infrastructure for Governance, Impact & Transformation) digital India E-governance Portal's Mortgage and Estate core modules for government employee using React JSX and parsing JSON from PostgreSQL database
- Compiled code for legal document upload and text extraction for verification in citizen portal's mortgage module, thereby preventing fraudulent document uploads

Infosys Limited, Chennai, India

Systems Engineer

Sept'18 – June'20

- Programmed Customer Account Opening (CAO) modules for customers with special needs in Royal Bank of Scotland (RBS) accounts portal to enhance 2020 Q1 customer lead generation and retention by 30%

PROJECTS

Implemented Semantic Image Segmentation for Improving Automated Driving, Northeastern University

Technologies: Python, Pandas, NumPy, OpenCV, Pytorch, Matplot Lib, Captum, Discovery Cluster

Dec'21 – Dec'21

- Employed UNet image segmentation model and Convolution Neural Network (CNN) to detect & segment objects, thus resulting in an IoU of 0.76 (76%). Model Interpretation was done using Pytorch Captum

Performed Multi class image classification using CNN, Northeastern University

Technologies: Python, TensorFlow, Pytorch, Tensor Board, Pandas, NumPy, Scikit-learn

Dec'21 – Dec'21

- Programmed multi class image classification using Pytorch deep learning models and Kaggle dataset to achieve a model accuracy of 97.6%

Improving Subscription Based Business by Predicting Churn, Northeastern University

Technologies: Python, Pandas, NumPy, Seaborn, Scikit-learn, Matplot Lib, Google Collab, Kaggle

Sept'21 – Nov'21

- Detecting customers that are likely to cancel a subscription to a service, by means of *Exploratory Data Analysis (EDA)*, *SelectKBest* for feature selection, feature engineering and data modeling involving 3 algorithms – *Support Vector Classifier*, *Random Forest Classifier* and *XGBoost* and achieving a best model accuracy of 96.11%

Automated Detection of Diabetic Retinopathy Using Deep Learning, Amrita Vishwa Vidyapeetham

Technologies: Python, Pandas, NumPy, Scikit-learn, Matplot Lib, OpenCV, Keras, TensorFlow

Jul'17 – Feb'18

- Used VGG-16 pre-trained convolutional neural network (CNN) model to train the network and to make predictions for automated graded detection of diabetic retinopathy (DR) in retinal fundus photographs with an accuracy of 89.6%