AVASH NEUPANE

Buffalo, NY | +1716-306-0999 | avashneu@buffalo.edu |
Website: https://www.datascienceportfol.io/avash
LinkedIn: https://www.linkedin.com/in/avash-neupane/
GitHub: https://github.com/avashneu

SKILLS

Programming Languages:	Python, R, MATLAB, SQL
Database & Analytics Tools:	MySQL, MS SQL, PostgreSQL, sqlite, Tableau, Excel, RShiny
Professional Skills:	Collaborative, Strong team spirit, Documentation, Presentation, Communication skills, Ability to work on several initiatives at same time in an organized fashion, Efficacious, Critical Thinking

EDUCATION

Masters in Data Science (MS ESDS) **Anticipated Dec 2022**
University at Buffalo, The State University of New York

- *GPA: 3.95/4.00*
- *Courses Taken: Statistics & Data Mining, Probability, Programming and Database Fundamentals, Machine Learning, Numerical Math, Deep Learning, Data Model Query Language*

Bachelors in Electronics and Communication Engineering **Oct 2018**
Tribhuvan University, Kathmandu, Nepal

EXPERIENCE

Business Analyst **June 2020 – Aug 2021**
Civil Bank Ltd., Kathmandu, Nepal

- Extracted transactional and non-transactional reports using MS SQL to aid in better decision making by head of departments and bank executives.
- Designed and documented concept papers (Virtual Card, Chatbot, Lead Management System) by identifying and pursuing technology opportunities in financial service industries, analyzing feasibility, performing analysis.
- Analyzed individual channel pain points, re-designed customer journey and facilitated end-to-end digitization process in concert with product development team.

Business Analyst **Feb 2019 – Jan 2020**
NIC ASIA Bank Ltd., Kathmandu, Nepal

- Extracted mobile banking transactional reports using MS SQL and devised marketing plans based on the trends that increased mobile banking users by almost 50% in a year.
- Coordinated in planning, execution and managing digital transformation projects (Business Intelligence & Analytics Solution, Customer Relationship Management, Omni Channel Digital Banking System, Interactive Voice Response (IVR) Banking).
- Collaborated with vendors to design functional requirement documents and keep track of development milestones within aligned deadlines.

PROJECTS

Geometric Deep Learning Methods with Drug Chemistry for Drug Pair Interactions: *Deep Learning, Deep Chemistry, Autoencoders, Convolution Neural Network(CNN), Multiclass classification, Python, Pytorch*

- Developed a classifier model to solve drug-drug pair interaction outcomes from SMILES(Simplified Molecular Input Line Entry System) representation of drugs.
- Converted the SMILES structure to molecular structure image in a feature space of 270,000, built an autoencoder network to capture and preserve important features in a 90% reduced dimensional latent space for efficient computation.
- Performed multiclass classification to predict an outcome from 86 different interaction types a generalizable multiclass classification model with accuracy of 80%.

Web Traffic Analysis and Forecasting: *Time Series Analysis, ARIMA(AutoRegressive Integrated Moving Average), R, Rshiny, Dashboard*
- Implemented multivariate time series forecasting to predict the web traffic density to provide insight into web traffic congestion and prevent unwanted outages.
- Performed exploratory data analysis, feature engineering to generate relevant features from 145,000 time series for 550 days, built ARIMA models to predict the future traffic of the website for the next 52 days.
- Designed an RShiny App and user-friendly dashboard to display the analytical results and the forecast visualizations and results.

Ride Hailing Apps Price Prediction: *Python, Exploratory Data Analysis, Sklearn, Keras, Neural Network, Regression*
- Created normalized database in SQLite consisting of 5 tables through Python from dataset of 600k+ samples.
- Performed exploratory data analysis and data visualization using normalized database.
- Developed artificial neural network model to predict price of rides from provided features for ride hailing apps.

Housing Price Prediction: *R, Exploratory Data Analysis, Feature Selection, Multiple Linear Regression*
- Performed exploratory data analysis, transformed skewed variables, pre-processed data by employing data wrangling techniques, and selected important features out of 81 features leveraging stepwise selection method.
- Developed multiple linear regression to obtain a housing price prediction model with high accuracy.

Split It Out: *Python, Optical Character Recognition(OCR), Natural Language Processing(NLP)*
- Developed 'Split it out', a bill sharing app using OCR for bill information extraction, NLP for determining total amount and expense category.

Image Processing based Traffic Density Management System: *Python, Image Processing, OpenCV, Raspberrypi*
- Architected traffic density management system with OpenCV for image processing and managed traffic lights using Raspberry pi.

AWARDS

Merit Scholarship, Kantipur Engineering College **2018**

INVOLVEMENT AND LEADERSHIP

Vice President, UB Earthquake Engineering Research Institute **Sept 2021 - Present**
Participant, UBHacking **Nov 2021**