Chaitanya Bhure

Machine Learning Research Assistant
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A motivated self-starter experienced in handling of raw, unstructured data and using various machine learning techniques to derive useful insights and make better predictions from the same.

#readytowork

Willing to relocate: Anywhere
Authorized to work in the US for any employer

Work Experience

Data Analyst Co-op

Open Energy Solutions Inc. - Mount Holly, NC
February 2020 to Present

Distributed Intelligence for energy Internet of Things (IOT):

• Monitor network traffic of an entire microgrid and detecting anomalies in the network for security

• Perform predictive analysis on the data to generate alerts before the actual anomaly takes place in real-time

• Determined a pattern of double the actual network traffic and removed the additional hosts which increased data collection efficiency by 50%

Machine Learning Research Assistant

UNC Charlotte - Charlotte, NC
August 2019 to January 2020

Traffic prediction using geospatial analysis

• Developed scripts to analyze 5 million records of data from NCDOT using Python in ArcMap

• Developed and compared GLS and Kriging models for geospatial data analysis and compared their performance to be implemented at NCDOT at production level

• Fine tuning both models to give similar RMSE’s and went ahead with GLS since Kriging was computationally expensive

Machine Learning Research Assistant

UNC Charlotte - Charlotte, NC
January 2019 to January 2020

Anomaly Detection in PMU Data

• Data collection from Phasor Measurement Units provided by Duke Energy, extraction of raw data consisting of 2 million records each day into human readable format using the openHistorian2.0 tool, processing the data using machine learning techniques and designing a model to detect anomalies in the data

• Implementing data manipulation and feature analysis techniques for dependencies to get better prediction results and to structure the raw data using Pandas library in Python

• Exploratory Data Analysis to detect wrong annotations and spotting trends using Advanced Excel and Python

• Anomaly detection using clustering, k-means and DBSCAN algorithms using Python and SAS E-miner to detect outliers with 85% accuracy.

Personal Project - Numeric Password Cracking

University of North Carolina at Charlotte - Charlotte, NC
May 2019 to July 2019

• Developed a Generative Adversarial Network from scratch using Numpy library in Python to predict a numeric passcode given by the user
• Tested a passcode of 500 digits which took 35,440 generations and just 50 seconds on the Google Colab platform to crack it

Personal Project - Personalized Image Tagging

University of North Carolina at Charlotte - Charlotte, NC
January 2019 to May 2019

• Predicted user-context based tags for images uploaded to social media in a dataset of 52,000 training images and 5000 test images with a unique context-aware model which takes into account the user-bias while tagging images.
• Boosted the accuracy to 92.8% with data augmentation using Pandas library in Python

Personal Project - Options Trading Predictions

University of North Carolina at Charlotte - Charlotte, NC
January 2019 to May 2019

• Successfully implemented a bleeding edge, transformer neural network to predict option trading strategies using half a decade worth of data for two companies with an accuracy of 93.1%
• Model suggests a contract to the user in real-time, with option trading parameters like calls or puts, strike price, date range and expected gain based on stock market data of the two companies

Personal Project - Object Detection and Tracking using Raspberry Pi

University of North Carolina at Charlotte - Charlotte, NC
August 2018 to December 2018

• Designed a 3-D printed robot face and fitted the eye-balls with raspberry pi cameras to perform object tracking
• Successfully detected and tracked a single object with near real-time movements using OpenCV and Python

Personal Project - VESIT Library Android Application

University of North Carolina at Charlotte - Charlotte, NC
July 2016 to February 2017

• Creator of the first android application using Android Studio, digitized volumes of paper transactions to make the process seamless and easy. Reduced the workload of the library staff to more than 30%
• Successfully led a team of four towards the application deployment on the Google Play Store where it currently has more than 1000 downloads

Education

Master of Science in Computer Engineering in Unsupervised Learning Algorithms for Anomaly Detection

University of North Carolina at Charlotte - Charlotte, NC
May 2020

Bachelor of Science in Electronic Engineering in Electronics Engineering

University of Mumbai - Mumbai, Maharashtra
May 2018

Skills

- Apache spark
- Python
- Keras
- Numpy
- Opencv
- Pandas
- Tensorflow
- Decision trees
- Deep learning
- K-nn
- K-means
- Logistic regression
- Machine learning
- Naïve bayes
- Neural networks
- Svm
- Clustering
- Power bi
- Sas
- Data analysis
- Google Cloud Platform

- Computer Vision
- Visio (2 years)
- Word (4 years)
- Excel (2 years)
- Waterfall
- SQL
- MySQL
- SQL Server
- SSIS
- Mathematics
- Statistics
- Matlab
- Image Processing (1 year)
- AI (1 year)
- C
- Algorithm
- Computer Science
- Hadoop
- Kubernetes (1 year)
- Docker (1 year)
- Microsoft Azure (1 year)
- Java

Links

https://github.com/chaitubhure

https://www.linkedin.com/in/chaitanya-bhure

Assessments

Data Analysis — Highly Proficient

September 2019

Interpreting and producing graphs, identifying trends, and drawing justifiable conclusions from data.
Full results: Highly Proficient

Personality: Hard-Working — Proficient

October 2019

Measures a candidate's tendency to be rule-abiding, well-organized, hard-working, confident, and think before acting.
Full results: Proficient

Spreadsheets with Microsoft Excel — Highly Proficient

February 2020

Excel knowledge including common tools, PivotTables, conditional & nested formulas, and custom visuals.
Full results: Highly Proficient

Research — Highly Proficient

June 2020

Following protocols, interpreting statistics and graphs, identifying errors, and choosing research methodology.
Full results: Highly Proficient

Indeed Assessments provides skills tests that are not indicative of a license or certification, or continued development in any professional field.

Additional Information

SKILLS
• Languages: Python, C, MATLAB, SAS, OpenCV
• Libraries: TensorFlow, Keras, PyTorch, Numpy, Scipy, Pandas, Scikit-Learn
• Tools and Platforms: Google Colab, Apache Spark, Google Cloud, Google Data Studio 360, Microsoft Power BI, GitHub
• Machine Learning Algorithms: Classification, Linear and Logistic Regression, Naïve Bayes, SVM, Decision Trees, Clustering (k-means, k-NN, Hierarchical), Deep Learning, Neural Networks, Time Series Data Analysis