ABHISHEK MAHESHWARAPPA

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EDUCATION

Northeastern University, Boston, MA Expected Aug 2021
Master of Science in Information Systems **GPA 3.7**

- **Courses**: Data Science, Advance Data science, Artificial Intelligence, High Performance Computing Machine Learning, Deep learning and Reinforcement Learning
- **Teaching Assistant**: Facilitate students in Advance Data Science (Hypothesis testing, Deep Learning and others) and Algorithmic Digital Marketing (Docker, Aws-Ec2, Tableau, PowerBI)
- **Co-Author** of Explainable AI- Model Interpretability book - Book Aug 2020
- **Vice President of AI Skunkworks** (Graduate Research Group) mentoring students on Explainable AI Jun 2020 – Present

WORK EXPERIENCE

Data Scientist / Machine Learning Ops (Co-op) Retail Business Services, USA Jan 2021 – April 2021

- Designed a deep learning classifier for more than 70 classes with a test accuracy of 98 percent using transfer learning
- Created a method for using a state-of-the-art Microsoft vision model for using it for to extract features from the image and employ transfer learning using that for classification Algorithm
- Implementing MLOps pipeline in Azure Machine learning for a project with a deep learning model, that gets the data from the datastore, trains the model, tests the model and deploying it as a web service.
- Devised a method for using Azure Synapse helping the clients to find a unified place for building pipeline, train model, write a query script and monitor all on the power BI and make integration seamless

Graduate Programmer Analyst Squark, Burlington, MA, USA (start-up) May 2020 – Sep 2020

- Conducted research with Northeastern University under Professor Nicholas Brown in collaboration with Squark startup
- Worked on production level code to model any dataset in **H20.ai** with preprocessor, feature selection and Auto modeling with doing prediction on the client production data.
- Investigated explainability of model generated by **H20.ai** using SHAP for throwing light on black box models which were generated by **parallelizing multiple H20.ai** subprocesses

Machine Learning Engineer Rove Labs, Bengaluru, India (start-up) Jun 2017 – Jul 2019

- Constructed ML models for data collected from the IOT (Internet of Things) devices and sensors. Designed different machine learning models as POC for different client data for predictive modeling

Electronic Products Engineer Hoysala Technologies (I) Pvt. Ltd, Bengaluru, India Nov 2015 – Apr2017

- Devised technical solutions in design and development of hardware for multi-function displays and power distribution systems

TECHNICAL KNOWLEDGE

Languages	Python, SQL, and Java
Technologies	Deep Learning - CNN, Reinforcement learning, Hypothesis Testing, Statistical Modeling, Decision tree, Random forest, Computer Vison, Microsoft Vision, Yolo object detection
Libraries	Numpy, Pandas, SciPy, scikit-learn, PyTorch, TensorFlow, Keras, H20.ai, Auto-ML
Tools and software	Linux, Hadoop, Git, Parallel programming, Jupiter, Anaconda, VS Code, Snowflake, Jira – Confluence, Docker, AWS- EC2, S3 bucket, Athena, Azure ML, Azure Synapse Analytics, Azure dev-ops

PROJECTS

Explainable AI - Model Interpretability (Numpy, Pandas, Deep Learning, Python, H2O) Feb 2020 – May 2020

- Developed different Interpretability methods for investigating models on computer vision and statistical models
- Write a hands-on book on Explainable AI on model Interpretability on techniques - PDP, ICE, TCAV, LIME and Shapely
- Contacted by startup, Squark, to collaborate on further research based on work in project

Multi-class Classification Retina funds Image (TensorFlow, CNN Keras, Python) GitHub – Link Feb 2020 – Mar 2020

- Created a Multi-class classification model for Comparison of different eye condition using Optical coherence tomography images
- Constructed a deep learning model, with four layers convolutional neural network with TensorFlow
- Trained the Network with accuracy of 97% on validation dataset

Price Optimization and Dynamic Forecasting – Dashboard (PowerBI, AWS -Ec2, Python) GitHub – Link Mar 2020 – Apr 2020

- Segmented customers into different categories and formulated a method for dynamic pricing and demand forecasting
- Demonstrated how sales can be improved with personalized coupons to different segmentation of the customer