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Hammad A. Usmani

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PROFESSIONAL EXPERIENCE

MIT Lincoln Laboratory – Software Engineer, DoD Secret Security Clearance **Lexington, MA | April 2018 – Current**

- Produces R&D, data analysis, machine learning, and software engineering to solve advanced weather problems.
- Engineers solutions with technologies including Python, Tensorflow, JavaScript, SQL, and Django on CentOS.
- Implemented lossless compression technique to reduce model output size by 99.2% in real time for live updates.
- Earned *2018 Best Paper Award* with team from Massachusetts Institute of Technology's Lincoln Laboratory.

Simpluris – Data Analyst

Orlando, FL | January 2017 – March 2018

- Completed 204 big data ETL projects as lead data analyst and processed more than 200 end to end projects.
- Produced and calculated analysis with SSRS reports utilizing SQL and Excel for class action lawsuits.
- Increased efficiency of API parsing algorithm by 97% from Big O(n) to Big O(log(n)) in Python & Scala.
- Developed duplication detection algorithm by incorporating Levenshtein Distance in Python & Scala.

SHAMAN – Software Engineer

Orlando, FL | October 2015 – December 2016

- Achieved multiple National Science Foundation Innovation Corps (I-Corps) grants for IoT and big data analytics.
- Developed software on various customer relationship management platforms including Salesforce and Odoo.
- Calculated reports and analytics through RapidMiner, Python, PHP, PostgreSQL and Tableau visualizations.
- Engineered prototyping boards with RFID read and write functionalities interacting with PostgreSQL in C.

EDUCATION

University of Central Florida – B.S. Computer Science

December 2016

Harvard Business School Online – CORE: Credential of Readiness, Pass

February 2017

Georgia Institute of Technology – M.S. Computer Science

Current

CERTIFICATIONS

IBM – Big Data Programming, Big Data Hadoop Foundations, Big Data Foundations

May 2016

Udacity – Machine Learning Engineer Nanodegree

March 2018

SKILLS

Programming Languages: Python, Scala, Java, C/C++, SQL, MongoDB, JavaScript, UNIX, Docker

Machine Learning: Supervised Learning, Unsupervised Learning, Reinforcement Learning, Deep Learning, GAN's

Big Data: Data Modeling, Data Analysis, Data Science, Spark, HDFS, AWS, Google App Engine, Azure ML Studio

PROJECTS

Hurricane ai: Recurrent Neural Network – github.com/hammad93/hurricane-net

January 2019

- Invented a novel deep learning framework for Atlantic tropical storms utilizing Bidirectional LSTM layers.
- Developed on Tensorflow, Google Colab, and Scala with data from Google Earth Catalogue and NOAA Databases.
- Presented at the 2019 American Meteorological Society's conference and accepted for the 2020 AI session.

Deep Learning: Convolutional Neural Network – hammad93.github.io/deeplearning

December 2017

- Trained and compiled an image classifier from a custom CNN architecture and transfer learning from ResNet50.
- Developed sequential architecture with convolutional, max pooling, and global average pooling layers.
- Classified images with an 81.0% accuracy after 20 epochs on a p2.xlarge AWS EC2 instance on a NVIDIA K80 GPU.

Big Data Management Tools – github.com/bdmt

April 2016

- Developed software for administration of Hadoop, HUE, Apache Ambari, Spark, YARN, Pig, and HIVE.
- Programmed administration metrics and visualizations by utilizing Node.js, AngularJS, and ChartJS.
- Delivered tools with research and development team for University of Central Florida affiliated use.