

Career Objective

High achieving MSc Computer Science in Artificial Intelligence student at NUI Galway with a proven ability to work effectively in a production systems. Worked actively with senior leadership for excellent business collaboration and profitability. 3+ years of IT experience and proficient in Python, Machine learning, Artificial Intelligence, Computer vision

Education

2019-2020 **Masters of Science**, [Computer Science(Artificial Intelligence)], National University of Ireland, Galway.
Expected Grade: 1.1

Modules: Machine Learning, NLP, Reinforcement Learning, Data Visualization, Computer Vision Pipeline, etc.

2012-2016 **Bachelors of Technology**, [Computer Science and Engineering], K. Es Rajarambapu Institute of Technology, Sangli. *Final Grade- 7.85*

Work Experience

July 2016- **System Engineer: Tata Consultancy Services Ltd.**

Aug 2019 **Client: Morgan Stanley Inc. October 2018- August 2019**

- Part of the center of excellence team for Informatica Intelligence Cloud Services (IICS) and Informatica Big Data Management(BDM).
- Worked on PowerBI visualization and integration with IICS.
- Worked on MySQL cube and OLAP reporting on IICS.
- Tested new features and implemented ETL on IICS and Informatica BDM.
- Automated monitoring and repeated activity using shell script, Powershell and Python.
- Production readiness and Bench-marking for BDM With Hadoop, Hive, Spark and Yarn.
- Developed and optimized Hive queries and jobs for heavy transnational data.
- Maintained IICS and BDM Agents on Windows and Linux environment.
- Analyzed and mining activities from large transactional unstructured data in Hadoop DataLake.

Client: Microsoft Inc. July 2016- October 2018

- Created and maintained fully automated CI/CD pipelines for code deployment using VSTS Deploy and PowerShell.
- Actively managed, improved, and monitored cloud infrastructure on Azure, including backups, patches, and scaling.
- Reduced costs by eliminating unnecessary servers and other infrastructure.
- Automated build and deployment using Azure DevOps to reduce human error and speed up production processes and PowerBI reporting for visualization.
- Worked with geographically distributed senior leadership level stakeholders.

Academic Projects

April 2020 - **Optimizing Neural Networks with evolutionary algorithms** (Presently working)

- o Performance of Feed forward neural networks depend upon the weights and NN architecture. Optimizing dep neural networks is a complex problem and gradient based or constructive heuristics will not be able to optimize these. In my MSc research thesis project working on genetic algorithms.
- o Distributed Evolutionary Algorithms in Python (DEAP) and other python modules like numpy, pandas, etc.

April 2020 - **Reinforcement learning agent for deterministic problem**

- o Using Python, created a 5x5 grid sized FrozenLake environment along with the necessary methods.
- o Implemented Q-learning on the FrozenLake problem to learn a policy which can navigate optimally through the lake.

- Ran the frozen lake experiment for episodes and output the action value estimates at the end of the learning process.
- Applied DQN on a similar problem using Keras to eliminate the value iteration and Q table.

April 2020 – **A Deep Learning Computer Vision Pipeline for Object Detection and Classification**

- Developed working computer vision pipeline to identify events over incoming video streams using deep learning techniques for object recognition and video analytics.
- Designed pipeline performed matching to identify events from a given video stream.
- The pipeline consisted of a video reader and a model cascade. The task was to detect object events (car) with specific attributes (car type and car colour).
- Deployed a state of the art object detector model (TinyYolo) to detect a car in the video.
- Train an existing pre-trained object classifier i.e. Mobilenet from Keras to detect car type example Sedan or hatchback
- Created an attribute classifier for colour detection of the car using OpenCV.
- Pipeline designed using python along with multiprocessing and queue module for parallel event processing.

August 2015 – **Intranet traffic analysis using Hadoop**

May 2016

- Created a prototype using Python, Hadoop to analyze intranet traffic data to avoid unethical use of Internet service provided by our Institute.
- Implemented Hadoop data pipeline to identify network usage over the college private network.
- Developed MapReduce jobs in Python for log analysis, visualization and data cleaning.
- Performed big data processing using Hadoop, MapReduce, etc. and Imported data from MySQL to HDFS, using Sqoop to load data.
- Developed and designed a 3-node Hadoop cluster for sample data analysis using commodity hardware available.
- Created visualizations and reports for the business team, using Python ggplot library and Microsoft PowerBI.
- Demonstrated the understanding of Hadoop, HDFS and presentation skills. Received AA on the project.

Skills

- Scikit-learn, TensorFlow, Python(Pandas/NumPy)
- Shell Script, PowerShell and Java
- PowerBI, Data Visualization with R and Python (ggplot/matplotlib, seaborn)
- Hadoop MapReduce, HDFS, Hive
- Excellent communication skill and good at writing technical documents for SOP.

Certifications

- IBM: Big Data Foundations - Level 1
- DevOps Foundation Certificate
- Microsoft 70-533: Implementing Microsoft Azure Infrastructure Solutions
- ITIL V3 foundation

Extra-Curricular

- Awarded as a “Employee of the Quarter Q1-2018” for cost effective implementation of service improvements to reduce overhead cost for client.
- A class representative for MSc AI 2019 in National University of Ireland, Galway.
- Volunteered for ACCESS department of NUI, Galway open day 2019.

Referee

- Dr. James MacDermott [Lecturer in Computer Science at National University of Ireland, Galway]
Email: james.mcdermott@nuigalway.ie
- Mrs. Smita Mahapatra [Technical Lead (Senior Manager) at Morgan Stanley]
Email: smitamahapatra08@gmail.com