Harsh Mishra

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SUMMARY

Computer Science graduate student with 2 years of Industry experience as a Systems and Software Engineer at Hewlett Packard Enterprise. Passion revolves around the application of Machine learning algorithms and Visual analysis of large scale datasets. Experienced in automating infrastructure and deployment using CI/CD.

EDUCATION

University of Illinois at Chicago (UIC) - Chicago, IL August 2021 - May 2023, *Master of Science in Computer Science* GPA: 3.8/4.0

People's Education Society University, (PESU) - Bangalore, India May 2019 *Bachelor of Technology in Computer Science and Engineering* GPA: 8.08/10.0

PROGRAMMING SKILLS

Proficient: Python, C , R, Ansible
Familiar: Scala, Java, PowerShell, Matlab, SQL
Beginner: Javascript, D3js, Julia
Application/Software: Tableau, Amazon Web Services, Docker

WORK EXPERIENCE

Hewlett Packard Enterprise (HPE) -Bangalore, India July 2019 – July 2021, *Systems and Software Engineer*

• Developed scripts to automate the deployment of MLOps as a Service offering. Gained experience in using APIs, porting PowerShell scripts to Python and using Ansible for deployment.

• Modeling Cyber threat patterns using Graph Databases and algorithms. Involved writing SQL queries using the Neo4j software.

INTERNSHIP EXPERIENCE

Hewlett Packard Enterprise (HPE) -Bangalore, India January 2019 – July 2019, *Software Engineering Intern*

• Deployed a DataOps pipeline using open source applications and developed bash scripts to automate the CI/CD pipeline.

PROJECTS

Research Assistant Computer Science Department, UIC (September 2021 – Present) - Current research is focused on Information propagation and node labeling in Graph Neural Networks and its applications on Event-stream data. Also worked on training Diffusion based Generative Models using Stochastic Differential Equations and Chaotic Maps as random noise. Work previously submitted to CVPR, ICML and NeurIPS conferences.

Streaming Pipeline - Built an end to end Log Analysis Pipeline. Hadoop Spark was used to crunch the log data, the results were streamed using kafka. D3.js was then used to dynamically visualize the streamed results. (Scala)

Image Recognition - Implemented a Neural Architecture Search (RL-NAS) to find the best combination of filters which aid recognition of CIFAR-10 images. The filters used included various Computer Vision defined filters like Harris Corner Detection, blurring etc. using OpenCV. (Python - PyTorch)

Abstractive Summarization - Developed a fully automated setup, which extracts tweets for a given keyword, in a given time period, and produces a concise summary along with the tweet sentiments. Google's T5 model was Fine Tuned for the Abstractive Summarization task. (Python)

Soccer Player Position Analysis - Used Uniform Manifold Approximation and Projection (UMAP) and Gaussian Mixture Models (GMM) to analyze soccer player positions based on data provided by fbref.com. (Python)

EXTRA CURRICULARS

· Coach in the Football for Social Change initiative from Tottenham Hotspur Foundation. Aug. ‘15 - Jan ‘20.

· Football Analytics articles for spursmishra.wordpress.com, Football Chronicle, Chance Analytics and SpursStatMan.com.

· Volunteer for the Rise Against Hunger Campaign, as part of HPE’s Global Day of Service.