PURVA SINGH
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## OBJECTIVE:

Aspiring to pursue a Masters with a specialization in Artificial Intelligence to expand my knowledge and explore various use-cases in the field of Natural Language Processing and Finance. Post masters, I want to work as a Data Scientist with a strong focus on research. In the long-term, I see myself as a Data Science expert capable of providing innovative solutions for complex business use-cases.

## EDUCATION:

B.Tech in Computer Science, Vellore Institute of Technology, Vellore. 8.55/10 2014 – 2018

## RELEVANT COURSES:

Soft Computing, Multivariate Calculus and Differential Equations, Theory of Computation, Agent Based Intelligent Systems, Image and Vision Computing, Applied Probability, Statistics and Reliability, Data Structures and Algorithms, Object Oriented Programming.

## INTERNSHIPS

**JP Morgan Chase & Co.**, Bangalore **Intern** January 2018 – June 2018

- Developed an interactive tooling framework for the DevOps team using Scala and Angular, which served as a monitoring interface and provided actionable insights to reduce the production incident response time.
- Developed a Level-3 support chat-bot using RASA NLU for automatic resolution of user queries via appropriate confluence pages, SME details, and service health-checks to reduce the pain points of the Operations Engineering team that used to handle L3 support issues manually.

## EXPERIENCE:

**JP Morgan Chase & Co.**, Bangalore **Software Engineer** July 2018 – Present

- Developed an Intelligent Portfolio Management framework using PyTorch library, which generates a client-specific report based on the analysis of the latest financial news articles, decks, and social media posts. The framework was developed to mitigate the pain points of advisors who invest numerous hours manually scanning through these articles. The framework also performs sentiment analysis on the generated report using BERT to analyze market sentiment for intelligent portfolio management.
- Developed an incident recommendation engine, which is used for improving production incident handling at JPMC by integrating critical contacts, SLAs, frequency of occurrence, data from previous issues, upstream and downstream interfaces, saving 2 hours per employee daily, and 12 hours in total for the entire team.
- Worked on developing an end-to-end framework for seamless data flow between various source systems and HDFS using Python script. Eliminated critical dependency on Kafka, provided edge node resiliency for source file arrival, and removed dependency on File Mover.
- Developed a token-based single sign-on authentication and authorization mechanism in Scala that leveraged existing on-premise Active Directory (AD) environment as the Identity Store that allowed existing account provisioning and entitlement processes to remain unchanged.

## TECHNICAL CERTIFICATIONS/PAPERS/PUBLICATIONS :

- Deep Reinforcement Learning for Credit Card Fraud Detection, Purva Singh, Dr. D.P. Acharjya, Neural Computing and Applications, Springer, 2020, (*Under review*).
- Intelligent Portfolio Management via NLP Analysis of Financial 10-K Statements, Purva Singh, International Journal of Artificial Intelligence and Applications (IJAIA), Volume 11, Number 5, 2020.

- Covhindia: Deep learning Model for Sentiment Polarity Detection of COVID-19 Tweets in Hindi, Purva Singh, International Journal on Natural Language Computing (IJNLC), Volume 9, Number 5, 2020.
- StockGram: Deep Learning Model for Digitizing Financial Communications via Natural Language Generation, Purva Singh, International Journal on Natural Language Computing (IJNLC), Volume 9, Number 4, 2020.
- Compilers Used in the Stratosphere Platform for Big Data Analytics, Chhandak Bagchi, Khushbu Chopra, Purva Singh, Dr. Rajasekhara Babu M, International Journal of Engineering Research and Technology (IJERT), Volume 9, 2020.
- Ethical Hacking and Penetration Testing, Purva Singh, Grace Hopper Conference, India (GHCI), 2019.
- Survey on MR Image segmentation using Fuzzy C-Means Algorithm, Purva Singh, Kashish Arora, Shivin Sinha, Sathyaraj R, International Journal of Engineering Research (IJER), Volume 6, 2017.
- AI for Trading Nanodegree Certification by Udacity, 2020.
- Natural Language Processing Nanodegree Certification by Udacity, 2020.
- Deep Learning Nanodegree Certification by Udacity, 2020.

**ACTIVITIES AND AWARDS:**

- Received Center of Excellence (CoE) award in the "Above and Beyond" category for contributions as a software developer in the Force-For-Good (FFG) hackathon.
- Bagged 1st position amongst 146 teams in AWS Deep Racer competition held at JP Morgan, 2020.
- Recipient of Software Engineering Program (SEP) Recognition Award for Q'2, 2019.
- Open source contributor on Github (username: purvasingh96) and Kaggle (username: purvasingh).
- Volunteered as a software engineer for NGO Rural Caravan, FFG Hack-a-thon, JP Morgan, 2019-2020
- Volunteered as a software engineer for NGO EnAble India, FFG Hack-a-thon, JP Morgan, 2018-2019
- Volunteered as a software engineer for NGO Amogh Pragati, Code-for-Good Hack-a-thon, JP Morgan, 2017
- Volunteered for NGO Akshaya Patra India, Bhilai, 2016