



PAVAN KUMAR SHESHANARAYANA

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About me:

I'm a Budding Data Science Enthusiast, with an eye and passion for creating data-driven Deep-learning (and ML) based solutions.

EDUCATION AND TRAINING

01/04/2019 – CURRENT – Paderborn, Germany

MASTERS IN COMPUTER SCIENCE – Universitat Paderborn

Master Thesis (with BMW Group, completed, awaiting final grades):

Cross-Domain Aspect-Based Sentiment Analysis with Multimodal Sources

- Deep learning (BERT + RNN/LSTM/Attention-based) models capable of extracting Aspect terms and sentiment developed as part of the core task.
- Macro-F1 performance increments by 25-29% over the baseline, applying semi-supervised methods.
- The models evaluated for their cross-domain adaptability scored Micro-F1 scores in the ranges of 80-95% across 4 of the overall 5 domains demonstrating the capability of domain adaptation in terms of sentiment.
- **Skills:** Transformers and BERT, PyTorch and AWS Sagemaker, NLP, Neural networks and Deep Learning, Semi-supervised learning, Topic modeling, and Aspect-based Sentiment Analysis.

Other Modules Completed:

- Statistical and Natural language Processing.
- Computational Argumentation using Machine Learning and NLP.
- Online and Adaptive Machine Learning.
- Interactive Data Visualization.
- Intelligence in Embedded systems.

Projects:

- **Knowledge Graph and Entity Summarization:** A selected knowledge graph(KG) based on multiple endpoints is pruned to a sub-KG using Link-based Algorithms such as LinkSUM, SALSA, and HITS. (<https://github.com/haseebjavaid21/kg-summarization>).
- **Fact-checker**, an NLP-based fact-checking application to test the correctness of facts. (<https://github.com/Pavansid94/Roadrunner>).

Address Paderborn, Germany

01/09/2012 – 06/09/2016 – Mysuru, India

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE – Vidyavardhaka College of Engineering

Address Mysuru, India

WORK EXPERIENCE

17/05/2021 – 01/10/2021 – Munich, Germany

MACHINE LEARNING INTERN – BMW GROUP

- Involved in tasks ranging from data wrangling to Deep learning modeling and Visualization as part of metrics. All the models were put together to be a part of a web app capable of demonstrating the scope of building a multi-modal-based Sentiment Analysis.
- To analyze sentiment and recognize emotion as part of the above, two different models from different modalities were trained and incorporated.
- **Skills:** Azure Virtual Machine, Web services, and DevOps. Elastic and Kibana. TensorFlow, Pytorch, transformers, and Flask. Python and JavaScript.

- *Worked as a full stack developer in integrating cloudconvert to the product 'xom' and was also involved in the maintenance of the xom API with simultaneous development of its client application.*
- **Skills:** Angular, Java

- *Development of a few rich Key Performance Indicators (KPIs) for a university entity on a 'Student life cycle' from Cassandra Datalake.*
- *Development of a solution for a student entity to guide him on his four-year study plans (link-based Analytical algorithms employed, an ongoing POC at the time of departing with the company).*
- *Analytical showcase comprising various visualizations and metrics from multiple backend KPI microservices brought up as dashboard widgets.*
- **Skills:** Java(Spring), Spring Boot, Angular, JavaScript, Predictive Analyses, Machine Learning, Neo4J, Cassandra and MySQL.

● **JOB-RELATED SKILLS**

Technical Skills

- Programming Languages: **Python, Java.**
- Cloud Platforms: **Azure, AWS.**
- Web Technologies: **Angular, JavaScript.**
- Frameworks: **Spring (Java).**
- Libraries: **Pytorch, TensorFlow, Keras, scikit-learn, transformers.**
- Build Tools: **Maven, Gradle.**
- Version Control system: **Git, Subversion (SVN).**
- Database: **MySQL, Postgres, Neo4J, Cassandra.**
- IDE: **Eclipse, Pycharm, Visual studio code.**
- Software development methodologies and tools: **Scrum, Jira.**

● **OTHER LICENSES & CERTIFICATIONS**

Convolutional Neural Networks

- Issuing Organization: Coursera
- Credential ID: T3MMXKF892X6
- Credential URL: <https://www.coursera.org/account/accomplishments/certificate/T3MMXKF892X6>

Neural Networks and Deep Learning

- Issuing Organization: Coursera
- Credential ID: PB4MXQMGKJCC
- Credential URL: <https://www.coursera.org/account/accomplishments/certificate/PB4MXQMGKJCC>

Structuring Machine Learning Projects

- Issuing Organization: Coursera
- Credential ID: V3ZUMS4HW6NQ
- Credential URL: <https://www.coursera.org/account/accomplishments/certificate/V3ZUMS4HW6NQ>

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Communication and interpersonal skills

- Dedicated and self-driven with strong communication skills.
- Able to comprehend complex requirements and articulate the same.
- Able to work independently but also act as a Team Player understanding the intricacies of the way any agile project team works.

Languages

English, German (A2), Kannada and Hindi.