

MANJUSHA PATTADKAL

Data Scientist

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PERSONAL PROFILE

Data Scientist with 3.5+ years of broad-based experience in building data-intensive applications, overcoming complex architectural, and scalability issues in diverse industries. Proficient in predictive modeling, business intelligence, and data visualization tools like Power BI and Tableau, as well as languages, including Python, C++ and SQL. Capable of creating, developing, testing, and deploying highly adaptive services to translate business and functional qualifications into sustainable deliverables.

AREA OF EXPERTISE

Data Visualization | Machine Learning | Deep Learning | Data Analysis | Project Management | Natural Language processing | Business Intelligence | Computer Vision | ETL | Quality Assurance | agile Technologies | Problem Resolution | Team Management | Excellent written and verbal communication | Reporting | Training & Development

EDUCATIONAL HISTORY

Master of Science in Digital Engineering

Otto-von-Guericke University, 2023

Bachelor of Engineering in Computer

University of Pune, 2017

WORK EXPERIENCE

Data Scientist, Nov 2022 - Present

XITASO GmbH, Augsburg, Germany

- Built predictive models using various machine learning algorithms for quality assurance of production with data from 46 sensors.
- Developed containers and deployed Recommendation System using Docker.
- Demonstrated knowledge infusion model with sub-graph embedding as optimization over ResNet model.
- Developed hyper-parameter tuning utilizing Bayesian optimization, random search and grid search for knowledge infusion models.
- Tested PyTorch-based deep learning and computer vision libraries for colourizing images.
- Implemented a pipeline in Azure DevOps to schedule a conditional run for a model.
- Provided technical leadership in a team to extract meaning from large scale data.

Recommendation System on German Domain Specific Text Data - Master Thesis, May 2022 - Oct 2022

XITASO GmbH, Augsburg, Germany

- Implemented a recommendation system with domain and language independent pre-processing techniques using statistical approaches.
- Architected vector search engine for fast indexed retrieval.
- Fine-tuned state-of-the-art German language model RoBERTa using training data which improved recommendations.
- Devised 3 evaluation measures which evaluates similar to human annotation by domain experts.
- Introduced novel statistical methods to remove stop words, resulted in an 11% increase in recall.

Data Science Intern, March 2022 - April 2022

XITASO GmbH, Augsburg, Germany

- Responsible for the creation and dissemination of trend analysis and root cause analysis using Python.
- Optimized the recommendation system that boosted recall by 12% for the previous sprint.
- Devised an evaluation method to reduce the time spent on human annotation by 16 hours per month.

Deep Learning Research Assistant, October 2021 - Jan 2022

Memorial Group, Otto-von-Guericke University, Magdeburg, Germany

- Produced 4 models for reconstruction of Low Dose CT-Scan images by using iterative processes like UNet, algorithms like FDK, PRIDICT and ensembles.
- Designed deep Learning model for Real-time X-ray-based 4D image guidance of minimally invasive interventions using PyTorch.

Data Analyst Intern, March 2021 - August 2021

Advantest, Böblingen, Germany

- Built a 360 degree view dashboard for supply chain in Power BI with multiple data sources using snowflake schema.
- Summarized data into readable and clear formats; provided insights on data trends and anomalies.
- Learned Power BI Report Scheduler consisted of 15 packages and 35+ reports triggered weekly.
- Optimized Power BI dashboards, resulting in a 10% reduction in memory usage and faster results.
- Designed a new tool that optimizes the order priority queue for supply chain, resulting in a 70% reduction in manual efforts and improved revenue and deadline management.

Business Analyst and Business Intelligence Developer, April 2018 - August 2019

Schlumberger, Pune, India

- Built 15 data models using star schema and deployed on Azure analysis services and devised more than 40 Power BI reports in domains like Finance, Marketing & Sales, HR, Supply chain that benefited more than 4K active users to create their own reports.
- Extracted data using PL/SQL and Python from Microsoft Excel, SAP S/4HANA and Oracle.
- Developed a monitoring system for the Microsoft Azure architecture in Power BI to get alerts, which reduce monitoring time daily by 25 mins.
- Communicated with stakeholders from various domains for requirement gathering, feedbacks and presenting the reports.

Software Developer Trainee, September 2017 - March 2018

Schlumberger, Pune, India

- Explored Oracle BI tools including Oracle Data Warehouse and OBIEE (Oracle Business Intelligence Enterprise Edition). Designed ETL workflows in Informatica 10.1 and bash script for automated job scheduling in Autosys.

IT SKILLS

- **Programming Language:** Python, R(basic), Core Java, C, C++, MYSQL, PL/SQL, dax, bash scripting, VBA
- **Database:** SQL Server, Oracle Data Warehouse, Azure Data Warehouse, Exasol, SAP S/4HANA
- **Libraries:** Numpy, Pandas, Scikit-Learn, Tensorflow 2.0, Keras, Pytorch, Opencv2, Ipywidgets, Plotly, Spacy, Raytune, Pytest
- **Tools:** Azure Data Factory, Azure Analysis Services, SQL Server Data Tool, Power BI, Tableau, Informatica, Visual Studio, Weaviate, Doccano, Docker, Git, Azure Devops, Atlassian Confluence, JIRA