

AVINASH KUMAR CHAURASIA

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About Me

I am an experienced data science professional with a master's degree in Computer Science from Paderborn University. I have expertise in Data Analytics, Process Automation, machine learning, behavioral authentication, IT Security, and Software Development.

Education

Paderborn University

2020 – 2023

*Master of Science in Computer Science; **Specialization:** Intelligence and Data*

Paderborn, Germany

Master Thesis: Benchmarking Brainwave-Based User Authentication Models

Chitkara University

2012 – 2016

Bachelor of Engineering in Computer Science

Punjab, India

Courses: Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Networking, Databases

Technical Skills

Languages: Python, Java, C, C++, HTML/CSS, JavaScript, SQL

Tools: Power BI, Jupyter Notebook, Github, Docker, MySQL, PL-SQL, Jenkins, Visual Studio Code, Azure Delta Lake, PyCharm, Latex, Eclipse, NetBeans

Technologies/Frameworks: Numpy, Pandas, Scrapy, NLTK, Statsmodels, MNE, Matplotlib, Seaborn, Scikit-Learn, TensorFlow, Pytorch, Sphinx

Operating Systems: Linux, Unix, Debian, Windows, MacOS

Experience

Weidmüller Interface GmbH and Co. KG.

March 2021 – September 2023

Working Student in Product Informations Management

Detmold, Germany

- Automated data ingestion and transformation process using Python scripting and workflow automation tools, resulting in a significant reduction in manual effort and accelerating data delivery timelines.
- Developed interactive Power BI dashboards, KPIs, and interactive visuals to deliver actionable insights and drive data-driven decision-making.
- Integrated big and complex production data from SAP ERP systems and PIM (Product Information Management) systems using Python.
- Performed anomaly detection using deep learning algorithms like autoencoders and one class Support Vector Machine to detect products, not adhering to the quality standards, thereby improving the overall data quality by 15%.

Technologies: PowerBI, Python, SQL, Numpy, Pandas, Scikit-learn, Tensorflow, Github, Azure, Matplotlib, Seaborn, Etree

Infosys Limited

July 2016 – February 2020

Systems Engineer

Hyderabad, India

- Worked for Data Analytics and Software Development projects.
- Utilized PowerBI to analyze and interpret client Mondelez's India-region chocolate product sales, crafting detailed dashboards, KPIs, and interactive visuals for the businesses to understand.
- Leveraged Power BI dataflows to streamline data preparation processes, enabling centralized data storage, cleansing, and transformation for enhanced reporting and analysis.
- Designed, implemented, and maintained Java applications for Proximus, leveraging technologies such as Java, Hibernate, HTML, CSS, and MySQL to deliver robust solutions meeting client requirements.
- Performed continuous code integration and deployment with Jenkins.
- Wrote Python scripts to extract automated error logs from the Linux and Unix servers, thereby removing manual intervention and improving the efficiency of the team.

Technologies: Python, Power BI, Java, Hibernate, HTML, CSS, Linux, Unix, Jenkins, PL-SQL, Shell, Excel, IBM BPM

Academic Projects

BrainModels | *Master Thesis* | <https://github.com/Avichaurasia/Brain-Models>

March 2023 - October 2023

- As part of my master thesis, I developed an open-source Python framework for benchmarking biometric systems based on human brain signals.
- Build various machine models such as SVM, LR, RF, KNN, LDA, NB, and deep learning models like Twin Neural Networks for classifying users based on their unique brain signals.
- Utilized auto-regressive model for time series analysis of brain signals and Power Spectral Density to calculate the cognitive load on the human brain.
- Achieved a remarkable Equal Error Rate of less than 0.04%, a significant milestone for biometric systems.
- Utilized Git for code integration, Docker for deployment, and Sphinx for effective code documentation.
- Collaborated with my thesis supervisor to author a research paper derived from my master's thesis, currently undergoing review for potential publication in the Journal of Information Security and Applications.

Technologies: Python, Numpy, Pandas, Statsmodels, MNE, Scikit-Learn, Tensorflow, Keras, Tensorflow_addons, Matplotlib, Seaborn, Git, Docker, Sphinx

Digital Tools for Strategic Product Planning | *Masters Degree Mandatory Project* **October 2020 - September 2021**

- Worked on various datasets to extract insights and visualize on Jupyter Notebook.
- Predicted the COVID cases through machine learning regression models and time series analysis, achieving 90% correct predictions.
- Utilized time series models ARIMA and SARIMAX for predictive analysis.

Technologies: Python, Numpy, Pandas, Tensorflow, Keras, Matplotlib, Seaborn, Plotly, Jupyter Notebook

Computational Argumentation | *Mini Natural Language Processing (NLP) Projects*

April 2021 - July 2021

- Worked on finding arguments and recognizing emotions in a text by Web scraping from various sources.
- Utilized deep learning methods like LSTM and BERT for text classification and summarization.
- Performed pre-processing using NLTK, and Feature engineering using Bag of Words and WordtoVec.

Technologies: Python, Numpy, Pandas, Scrapy, NLTK, Tensorflow, Keras, Matplotlib, Seaborn, Jupyter Notebook

Awards and Recognition

- Proximus Team of the Year award (07/2018).
- Employee of the month award (05/2018).

Languages

- English - *Fluent*
- German - *Basic (A2)*
- Hindi - *Mother Language*
- Punjabi - *Fluent*

Hobbies and Interests

- Travelling
- Reading
- Watching Sports