Harsh Mukhiya

Software & AI/ML Developer

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PROFESSIONAL SUMMARY

Computer Science student with hands-on experience in AI/ML development, data analysis, and full-stack development. Proven track record in pharmaceutical AI applications, having processed 1M+ compounds and developed automated ML workflows. Passionate about leveraging technology to solve complex problems in healthcare and beyond.

EXPERIENCE

Sanofi-Aventis Deutschland GmbH   **Frankfurt am Main, Hesse, Germany (Hybrid)**
Biostatistics and Programming   *Aug 2025 - Oct 2025*

- Developed R programs to accelerate statistical analyses and deliver clear, intuitive visualizations
- Applied Bayesian statistical methods to improve uncertainty measurement and enhance decision-making reliability
- Designed study methodologies that strengthened clinical trial strategies and research outcomes
- Ensured statistical tools were accurate, efficient, and reproducible — bridging theory with practical application
- **Skills:** R, Shiny, brms package

Sanofi-Aventis Deutschland GmbH   **Frankfurt am Main, Hesse, Germany (Hybrid)**
AI & Deep Learning   *Aug 2024 - Nov 2024*

- Spearheaded development of automated AI workflows using Netflix's Metaflow framework, reducing model development time by 40% for drug discovery applications
- Architected scalable data pipelines integrating RDKit, Scikit-learn, and PyTorch, successfully processing 1,000,000+ pharmaceutical compounds with 95%+ accuracy
- Collaborated with cross-functional teams to implement machine learning solutions for compound analysis and molecular property prediction

Sanofi-Aventis Deutschland GmbH   **Frankfurt am Main, Hesse, Germany (Hybrid)**
Data Analyst   *Aug 2023 - Oct 2023*

- Led comprehensive data analysis initiatives for insulin production optimization, achieving 15% efficiency improvement
- Developed interactive dashboards using Python, Matplotlib, and Seaborn, presenting insights to stakeholders and management
- Applied advanced statistical methods including regression analysis and hypothesis testing to identify critical production bottlenecks

Sanofi-Aventis Deutschland GmbH   **Frankfurt am Main, Hesse, Germany (Hybrid)**
Software Developer   *Feb 2023 - Apr 2023*

- Developed responsive chemical visualization website using Django & JavaScript, integrating JSME molecular editor to increase user engagement by 60%
- Engineered robust backend architecture handling 1,000+ requests/minute using multi-threaded processing and optimized database queries
- Reduced API response latency by 50% through strategic database indexing and query optimization techniques

TECHNICAL SKILLS

Programming Languages	Python (Advanced), R (Intermediate), JavaScript (Intermediate), Java
Machine Learning & AI	PyTorch, Scikit-learn, TensorFlow, Hugging Face Transformers, Metaflow
Data Science & Analytics	Pandas, NumPy, Matplotlib, Seaborn, Jupyter, Shiny, Excel
Web Development	Django, Flask, FastAPI, HTML5, CSS3, JavaScript, REST APIs
DevOps & Tools	Git, GitHub, Docker, Linux CLI, Bash Scripting, Conda, VS Code
Databases	PostgreSQL, MySQL
Languages	German (C1 - Fluent), English (C1 - Fluent)

KEY PROJECTS

NLP / Machine Learning

Automatic Classification of German Business Documents using BERT   *Nov 2025 – Present*

- Developing a BERT-based system to automatically classify German business documents (invoices, contracts, complaints)
- Built and compared multiple German BERT variants to maximize classification accuracy
- Exposed the model via REST API with minimal web interface for real-time classification
- **Technologies:** Python 3.10+, PyTorch, Hugging Face Transformers, scikit-learn, FastAPI/Flask

Data Visualization / Web App

6/49 Statistical Visualizations Shiny App   *Sept 2025 – Present*

- Built an interactive Shiny dashboard for Lotto 6/49 data analysis and visualization
- Explored historical draw trends through dynamic and intuitive charts
- Deployed live interactive app: lotteryinsights.dpdns.org
- **Technologies:** R, Shiny, HTML5, CSS

EDUCATION

Frankfurt University of Applied Sciences   Frankfurt am Main

Bachelor of Science in Computer Science, *Expected Graduation: 2025*   *Mar 2020 – Present*

- **Specialization:** Software Engineering, Machine Learning, Data Science
- **Relevant Coursework:** Algorithms, Database Systems, Software Engineering, Artificial Intelligence

Studienkolleg Hochschule Konstanz   Konstanz

German University Entrance Qualification, *Grade: Excellent*   *Mar 2019 - Feb 2020*

- **Focus:** Mathematics, Technology, and Engineering (T-Kurs)

CERTIFICATIONS & ACHIEVEMENTS

- **Web Security Fundamentals** - Hacksplaining OWASP Certification (2025)
- **Python Programming Gold Level** - Hackerrank Coding Platform Achievement (2024)
- **Machine Learning Fundamentals** - Datacamp Online Course Completion (2021)