# MOHAMMAD JIBRAN

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# ASPIRING DATA SCIENTIST - B. TECH. IN AI

Skillset in: Data Modelling || Big Data Technologies || Predictive Analysis || Machine Learning || Data Governance || Deep Learning || Statistical Analysis || Root Cause Analysis || Stakeholder Collaboration

# **PROFILE SUMMARY**

A results-driven individual with a keen analytical mindset and a passion for extracting meaningful insights from complex datasets. Skillset in developing complex data models using diverse datasets, including structured, semi-structured, and unstructured data.

- ✓ Data Analysis: Capable in data manipulation, cleaning, and visualization using tools like Python, R, and SQL to extract meaningful insights from large datasets.
- ✓ Machine Learning: Solid understanding of machine learning algorithms and techniques, including supervised and unsupervised learning, regression, classification, clustering, and deep learning.
- ✓ Statistical Analysis: Ability to apply statistical methods and hypothesis testing to analyse data, identify patterns, and make data-driven recommendations.
- ✓ **Predictive Modelling:** Knowledge in building predictive models and evaluating their performance metrics to forecast trends, identify opportunities, and mitigate risks.
- Data Visualization: Skillset to create clear and compelling data visualizations using libraries such as Matplotlib, Seaborn, and Tableau to effectively communicate insights to stakeholders.

Technical Skills: Programming Languages: Python | Machine Learning Libraries: TensorFlow, PyTorch, scikit-learn, huggingface || Data Processing Tools: Pandas, NumPy, SQL || Visualization: Matplotlib, Seaborn, Tableau || Cloud Platforms: AWS, Google Cloud | Version Control: Git, GitHub, GitLab

### PROFESSIONAL EXPERIENCE

A.I Engineer ► Briskbold------- Jul. 2024 - Present

- Gather, clean, and preprocess data from various sources, handling missing data, outliers, and inconsistencies. Design and develop bots using Automation Anywhere to automate repetitive tasks, ensuring efficiency and reliability.
- Assist in designing, implementing, and fine-tuning machine learning models. Train models using appropriate datasets, evaluating performance with metrics like accuracy and precision, and ensuring reliability through cross-validation.
- Implement and optimize AI algorithms in Python or other languages for real-time and batch processing. Integrate machine learning models with Automation Anywhere to enhance decision-making and data handling in automation workflows.
- Collaborate with software engineers to integrate and deploy AI models in production environments, monitoring and updating models as needed. Deploy bots in production, ensuring smooth operation and error handling.
- Work closely with data scientists, engineers, and stakeholders to understand requirements. Communicate findings to nontechnical team members and participate in code reviews and team meetings.
- Document data processes, model development, and deployment procedures. Create technical reports and maintain version control for code and models using tools like Git.
- Ensure AI models are fair, transparent, and free from bias. Stay updated on AI research, experiment with new technologies, and contribute to the development of AI tools and libraries while considering ethical implications.

# **Data Scientist** ► Arcadix------Jul. 2023 – Aug. 2023

- Utilized advanced statistical techniques for predictive modelling, classification, and clustering in projects.
- Collaborated with cross-functional teams to develop and implement machine learning algorithms for data-driven decisionmaking.
- Communicated technical concepts effectively to non-technical stakeholders, fostering understanding and alignment.
- Contributed to the development of data-driven strategies to optimize business processes & improve performance.

Conducted thorough data analysis to identify patterns and insights, leading to actionable recommendations.

# **EDUCATION**

# B. Tech in CSE specialized in A.I. @ Jamia Hamdard

2024

### Certifications:

- An Introduction to Artificial Intelligence | IIT Madras | Apr. 2024
- Privacy and Security in Online Social Media | IIT Hyderabad | Apr. 2024
- Intellectual Property | IIT Hyderabad | Jan. 2024 Apr. 2024
- Data Science Masterclass | Jun. 2022 Jul. 2022

#### **PROJECTS HANDLED**

# **Image Text Extraction Project:**

- **Description:** Developed an image text extraction project aimed at converting image descriptions into machine-readable text. Leveraged Optical Character Recognition (OCR) techniques using Python libraries such as by tesseract.
- Technologies: Python, pytesseract, OpenCV, Git.

# **Violence Detection Model:**

- **Description:** Developed a violence detection model leveraging machine learning techniques to identify and classify violent behaviour in video content.
  - Aimed to enhance safety measures and security protocols in public spaces, including surveillance systems and social media platforms.
- Technologies: Python, TensorFlow, OpenCV, Scikit-learn.

# **Movie Recommendation System:**

- Description: Designed and implemented a movie recommendation system utilizing collaborative filtering techniques to
  personalize movie recommendations for users based on their historical preferences and behaviour, and enhance user
  engagement and satisfaction on a streaming platform by providing tailored movie suggestions.
- Technologies: Python, pandas, NumPy, scikit-learn, Surprise, HTML/CSS/JavaScript.

# **Advanced Domain Expert System with Llama 2 Integration:**

- Large Language Models: Implemented and fine-tuned Llama 2 using PyTorch and Hugging Face Transformers, utilizing PEFT for domain adaptation.
- Machine Learning & NLP: Developed custom NLP pipelines using spaCy and NLTK, implementing advanced text classification
  and named entity recognition models.
- Web Development: Built RESTful API using Flask/FastAPI and developed a responsive front-end interface with React.
- Database Management: Designed and implemented a knowledge graph using Neo4j, optimizing data retrieval with Elasticsearch.
- Cloud & DevOps: Deployed the application on AWS using Docker and Kubernetes, implementing a CI/CD pipeline using GitLab CI.
- Data Processing & Analysis: Integrated real-time data streams using Apache Kafka and performed complex data analysis and visualization with Pandas and Plotly.
- AI Explainability: Implemented model interpretability using SHAP and created interactive visualizations of AI decision processes.
- Security & Performance: Implemented OAuth 2.0 & JWT for secure authentication, optimizing system performance using Redis caching.
- **Testing & Quality Assurance:** Developed comprehensive unit and integration tests using Pytest and performed automated UI testing with Selenium.
- Version Control & Collaboration: Managed the project using Git and GitHub, leading code reviews and maintaining documentation.

# **Results:**

- Decreased expert consultation time by 60% through the deployment of the AI-powered system.
- Attained 95% accuracy in domain-specific predictions, verified against benchmarks set by human experts.
- Enhanced system performance to support over 1000 concurrent users with sub-second response times.