

Rehan Khan

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🎓 Education

Oriental Institute of Science and Technology,
B.Tech - Computer Science and Engineering - (Data Science) GPA-8.76

2020 – 2024 | Bhopal

💼 Professional Experience

Opsight.AI, AI/ML Intern

Jan 2024 – present | New Delhi, India

- Applied machine learning and Natural Language Processing (NLP) techniques to develop a conversational AI chatbot for manufacturing operations.
- The chatbot, trained on manuals and specifications of manufacturing machines, indirectly contributed to an 89% increase in production efficiency through streamlined information retrieval and process optimization.
- Worked on a project centered around an EC series robot arm by Elite Robots, involving extensive data collection exceeding 30GB, identification and logging of over 50 requested data tags into InfluxDB, real-time monitoring and logging of robot controller data, and implementation of Python scripts to modify robot parameters.

National Institute of Technology Trichy (NIT Trichy),

May 2023 – Jul 2023 | Remote

Summer Research Intern

- Researched Network Lateral Movement, emphasizing threat identification and mitigation within network infrastructures.
- Explored cyber security and machine learning concepts such as cyber deception and anomaly-based frameworks.
- Authored publication based on research findings, contributing valuable insights to the field of cyber security.

📁 Projects

Algomatrix [Available on PYPI, the official Python Package Index], Python, Scikit-Learn, PyPI [↗](#)

- Developed and maintained Algomatrix, a Python-based machine learning package for streamlined model selection and evaluation, resulting in a 25% reduction in model development time. Algomatrix simplifies the comparison of machine learning algorithms, catering to classification (binary and multiclass) and regression tasks.
- Published Algomatrix on the official Python Package Index (PyPI), enabling easy installation with pip, achieving over 1,000 downloads.

Q&A RAG App, Python, Streamlit, Groq, Llama3-8b-8192, Langchain, FAISS [↗](#)

- Designed and built an interactive chatbot enabling users to ask questions and receive answers from their uploaded documents.
- Optimized model execution by utilizing the efficient Groq inferencing engine with an LPU (Language Processing Unit).
- Developed a user-friendly interface using the Streamlit framework, fostering easy interaction with the chatbot.

📖 Publications (30+ Citations)

Conversational AI : Dialoguing Most Humanly With Non-Humans, Wiley Publications [↗](#)

- Conducted an in-depth exploration of cutting-edge AI techniques like NLP, NLU, and NLG using GPT-3 for advanced conversational agents. Presented novel approaches and best practices for building intelligent conversational systems engaging in natural, human-like dialogues across various domains.
- Discussed applications in customer service, healthcare, and education.

IoT : Security Challenges & Concerns for Cyber Vulnerability, IGI Global [↗](#)

- Analyzed security challenges and vulnerabilities in IoT systems.
- Discussed strategies to mitigate cyber vulnerabilities in IoT systems.

🎯 Skills

Languages — Python, Java, SQL

Technologies — Machine Learning, Data Analytics, Programming/Object-Oriented Programming, Spreadsheets, Research, Debugging, Prompt Engineering, Penetration Testing/Cyber Security, Ethical Hacking

Tools/Frameworks — Linux, Git/GitHub, Streamlit, Docker, SQLite, InfluxDB

📄 Certificates

Machine Learning Specialization by Andrew Ng [↗](#) | Harvard's CS50 Programming with Python [↗](#) |

Google Cybersecurity Specialization [↗](#) | AWS Machine Learning Foundations [↗](#) |

Google Data Analytics Professional Certificate [↗](#) | Write and Publish a Scientific Paper [↗](#) |

Philosophy of Science [↗](#) | AI, Empathy & Ethics [↗](#)