NAMAN CHOUDHARY

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OBJECTIVE

Detail-oriented Data Scientist with 2 years of experience specializing in Artificial Intelligence, Machine Learning, Deep Learning, NLP, LLMs, Data Visualization, and data-centric decision making seeking full time roles starting May 2025

EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Master of Science in Mechanical Engineering (Artificial Intelligence focus), **GPA: 3.96/4.0**   Aug 2023 - May 2025

- Relevant Coursework: Mathematical Foundations for ML, Computational Foundations for ML, ML and AI for Engineers (Teaching Assistant), Engineering Computation (C++), Deep Learning, Advanced NLP
- Graduate Researcher at the Mechanical & Artificial Intelligence Lab under Dr. Amir Barati Farimani, exploring deep learning techniques, especially Large Language Models (LLMs), for time series forecasting in engineering

Delhi Technological University   Delhi, India
Bachelor of Technology in Mechanical Engineering, **GPA:8.75/10**   Aug 2017 - Jul 2021

EXPERIENCE

O-I Glass   Pittsburgh, PA
Data Science Intern   May 2024 - Present

- Transformed Excel-based models into a dynamic Python platform, cutting processing time by over 90%
- Engineering a data pipeline for automated data updates, seamlessly feeding into an interactive Python Streamlit interface, facilitating real-time analysis and visualization, enhancing efficiency (SAP HANA, Microsoft Azure ML)
- Developing machine learning models to predict future CO_2 emissions, leveraging statistical correlations and deep learning techniques to inform net zero pathways and optimize furnace performance

ICF Consulting   Delhi, India
Energy Analyst   Nov 2021 - Jun 2023

- Developed quantitative excel models for hydrogen demand assessment (16 MTPA), reduction in import bill ($20 billion), and CO_2 emission reduction (60 MTPA) by switching to hydrogen by 2040 Key clients: World Bank, GAIL, Niti Aayog
- Collaborated across 3 teams: hydrogen, oil & gas, and power & RE, delivering more than 10 diverse client assignments
- Received the 'Bronze Award' due to contributions to a critical assignment for developing expertise in Hydrogen

SKILLS

Languages: Python, C and C++, OpenGL, LaTeX, SQL
Machine Learning & Deep Learning: Scikit-learn, Pandas, Numpy, Pytorch, SciPy, TensorFlow, CUDA, Azure ML
Natural Language Processing: Hugging Face Transformers, LangChain
Other tools: Excel, PowerPoint, PowerBI (Data Visualization), Cloud Environments (AWS, GCP), Weights & Biases (wandb)

PROJECTS

Reinforcement Learning Framework for Financial Portfolio Management   Feb 2024 - ongoing
Key Skills: Deep Learning, Reinforcement Learning, Python, Financial Modeling, Time Series Forecasting, GCP, CUDA

- Assessed financial prediction accuracy using Adversarial Attention-based LSTM to establish a performance benchmark
- Integrated OneNet, an online ensembling method, to explore adaptive solutions for concept drift in financial data
- Engineering a reinforcement learning framework to manage financial portfolios using market data, to assess P&L

Retrieval Augmented Generation (RAG) & LLM Integration for Q&A Systems   Jan 2024 - ongoing
Key Skills: Python, LangChain, Hugging Face Transformers, Streamlit, Large Language Models (LLMs), RAG System

- Orchestrated RAG & LLM integration, advancing accuracy in AI-driven Q&A, minimizing response hallucination
- Investigating Self-RAG to optimize adaptive retrieval and self-critique, enhancing generation factuality
- Devised interactive user interface with Streamlit, promoting user engagement through query processing

Dynamic 2D Top-Down Action Game   Oct 2023 - Nov 2023
Key Skills: C++, OpenGL, Generative AI

- Directed a team of six in the creation of the game, focusing on project management with C++ and OpenGL development
- Developed and coded ability animations and enemy character design, adding interactive elements to the game
- Collaboratively utilized generative AI to create background images and cutscenes, enriching the game's narrative

PUBLICATIONS

- Co-authored **8 publications** in reputed journals & international conferences on optimization of process parameters, numerical analysis & computational fluid dynamics (CFD), achieving **26 citations** | Google Scholar Link

EXTRA-CURRICULAR ACTIVITIES

- Engaged in APFSD and ECOSOC Youth Forums 2022, shaping SDG review on "Building back better post-COVID-19" and advancing youth-driven 2030 Agenda in Asia-Pacific