HRITVIK GUPTA

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EDUCATION

University Of California, Riverside — Riverside, CA
Master of Science Computer Engineering | GPA:3.6/4.0 — *Sep 2022 - Dec 2023*
Coursework: Compiler, AI, Computer Architecture, DBMS, Distributed Computing, Big Data, cybersecurity, GPU, Data mining.

Geetanjali Institute Of Technical Studies — Udaipur, India
Bachelor of Technology Computer Science & Engineering | GPA: 9.25/10 — *Aug 2018 - Sep 2022*
Coursework: Data Structures, AI, Distributed Systems, Mathematics, Statistics, Software engineering, Cloud Computing, Databases.

SKILLS

Languages: Python, C++, Java, JavaScript, Typescript, HTML5, CSS3, Kotlin, SQL, C#, PHP, R.
Frameworks: Tensorflow, PyTorch, React.js, Angular, jQuery, Cuda, Node.js, MongoDB, GCP,AWS S3, Sagemaker.
Technologies: Git, Docker, kubernetes, Machine learning, Deep learning, NLP, computer vision, Linux, Agile.
Data Skills: Numpy, Pandas, NLTK, Seaborn, Scikit-Learn, Tableau, Spark, Matlab, Langchain, EDA.

WORK EXPERIENCE

Gradute Research Assistant — Sep 2023 - Dec 2023
University of California, Riverside — *Riverside, CA*
- Researched on AI chatbots for social media app, using NLP and reinforcement learning for real-time engagement.
- Realized a 30% precision improvement in Large Language Model research by studying Transformer algorithms.
- Reduced computational costs in data processing workflows by 80% through algorithm efficiency enhancements.

Research Intern — March 2021 - May 2022
Indian Institute Of Technology Roorkee — *Roorke, India*
- Led AI research in frontal cognition, enhancing system efficiency by 75% with advanced EEG and NLP.
- Designed signal processing worflows for EEG data, reducing errors by 30% focusing on data quality.
- Focused on optimizing TensorFlow frameworks for LLM, incorporating probability and optimization algorithms.
- Collaborate with 4 PhD scholars, co-authoring a publication featured in an IEEE Journal, leading to 50+ citations.

PROJECTS

AI-Driven Data Analysis Platform *link to project* — Feb 2024
- Developed a web Flask application leveraging OpenAI GPT LLM tools to automate exploratory data analysis.
- Utilized Docker containers on render, enabling efficient distribution and hosting for enhanced scalability by 70%.
- Built a cloud-based ML pipeline using Langchain, OpenAI, E2B, boosting data analysis speed by 95%.

End-to-End Machine Learning Application on AWS and Digital Ocean | *link to project* — Jan 2024
- Designed pneumonia detection model with ResNet and computer vision, achieving 95% accuracy on given dataset.
- Employed AWS SageMaker, S3, Lambda, and API Gateway for streamlined ML operations and model deployment.
- Developed Next.js web app with Node.js, Express, MongoDB on Digital Ocean, integrated AWS endpoints.

Personalised GPT: Streamlit-Based Application | *link to project* — Jan 2024
- Developed Streamlit app with LLMs and vector database for resume QA, achieving 70% better query efficiency.
- Integrated advanced ML techniques like vector databases and LLM fine-tuning with HuggingFace, Langchain.
- Deployed Docker container on AWS Lambda for application scalability, achieving a 25% faster deployment times.

Flu Trend Analysis via PySpark and GeoPandas | *link to project* — Dec 2023
- Built a user-friendly web interface powered by Tableau, enabling intuitive exploration and analysis of flu trends.
- Enhanced flu trend analysis by 80% with PySpark and Hadoop, ARIMA on AWS S3 for California heatmaps.

EXTRA-CURRICULAR

- Author of 3+ research featured in IEEE journals in NLP with 75+ citations, signifying notable field impact.
- Taught 200+ students in Python, JavaScript, and Data Structures; also started a *Youtube* channel on AI and NLP.

PUBLICATIONS

[1] M. Gupta, H. Patel. Extractive Text Summarizer with Elmo. In 2020 4th I-SMAC, pages 829–834, 2020.
[2] M. Gupta, H. Patel. Text Summarization: LSA Topic Modelling with BERT. In 2021 Int. Conf. on AI Smart Systems, pages 511–517, 2021.
[3] S. Gupta, H. Kalla. Micro State EEG Analysis via RNN. In 2021 i-PACT, pages 1–6, 2021.