Saurabh Singh

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EDUCATION

National University of Singapore — Singapore
Masters in Computing: Artificial Intelligence specialization — *Jan. 2022 – Dec. 2023*

SRM Institute of Science and Technology, Kattankulathur — Chennai, India
Bachelor of Technology in Computer Science and Engineering — *Aug. 2015 – May 2019*

WORK EXPERIENCE

Research Engineer – Data Science — May 2024 – Present
Nanyang Technological University — *Singapore*
- Spearheaded the computational analysis for the "Information and Perception Analysis in Online Groups" project, leading LLM-based topic modeling, user role classification, and behavioral pattern analysis to enhance insights into user engagement.
- Engineered LLaMA model and applied NLP techniques for user role prediction and misinformation analysis, improving understanding of information dissemination and user behavior.
- Led a team of 4 research engineers and managed a climate change misinformation analysis on social media, developing an AI web scraper to detect and analyze false narratives.

Research Assistant - Machine Learning — Jul 2022 – Nov 2023
NUS Human Computer Interaction Lab — *Singapore*
- Developed an advanced eye gaze recognition model using graph neural networks and dynamic programming, achieving 98% precision and 97.67% accuracy on unseen data.
- Optimized data processing on a 10-gesture dataset, demonstrating superior performance over models like ANN, CNN, GRU, LSTM, and GCN.

Software Engineer, Research and Development — Jan 2019 – Oct 2021
Hewlett Packard Enterprise — *Bengaluru, India*
- Led the development of HPE's proprietary Storage Solution (SEMC), in 6 Support Program Releases and drastically reducing post-release bug reports by 34%.
- Actively collaborated with cross-functional teams to enhance system robustness and UX by using React/Node.js to engineer reusable UI components.
- Partnered with Japanese teams to implement localization for international customers, also leveraged Agile methodologies and CI/CD with GitHub and Jenkins.
- Designed UX interfaces, achieving 100% backlog clearance, and utilized Pytest, Grafana, and Kibana for testing and monitoring, ensuring high-quality software releases.

RESEARCH AND PROJECT EXPERIENCE

Eye-gaze Pattern Recognition [Master's Thesis]: Neural Network (ANN, CNN, GRU, LSTM, GCN)
Face Spoofing Detection [Thesis]: SVM, Feature Engineering
- Published research paper in the *International Journal of Engineering and Advanced Technology*, 2019.

Generative AI Self-Introduction App: OpenAI, LangChain, RAG, Streamlit
News Popularity Analysis: PySpark, Sentiment Analysis, Bias Detection, Clustering

TECHNICAL SKILLS

Certifications: Microsoft Azure Fundamentals & Azure AI, Data Science and Artificial Intelligence (ACM)
Languages: Python, SQL, JavaScript, HTML/CSS
Frameworks: React, AngularJS, PyTorch, TensorFlow, Keras, Apache, PySpark, Hadoop, RESTful APIs
Developer Tools: Git, Jenkins, Jira, Docker, Kubernetes
Libraries: Pandas, NumPy, Scikit-Learn, NLTK, Spacy, Seaborn, Plotly, Streamlit
AI/ML & Cloud Computing: Azure AI, Azure SQL Database, AWS Cloud, NLP, Deep Learning, Computer Vision, LLMs