SAURABH SINGH

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Data Scientist/Engineer with 3 years of Software Engineering & 2 years of AI/Machine learning research

EDUCATION

National University of Singapore Jan 2022 – Dec 2023
Masters in Computing, Artificial Intelligence specialization Singapore

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

WORK EXPERIENCE

Full-Time:

Software Engineer – Full Stack and Data Engineering Aug 2019 – Oct 2021
Hewlett-Packard Enterprise *Bengaluru, India*

- Spearheaded StoreEasy Management Console (SEMC) development, leading a scalable and reusable data pipeline creation, enhancing software quality by 40% in 4 Feature Program releases with clean and maintainable code
- Orchestrated Agile development with Jira-Kanban in a 14-member team, ensuring efficient project implementation
- Applied CI/CD (GitHub Actions) and Jenkins for streamlined software delivery, achieving a 10% profit amid Covid.
- Engineered reusable UI components in React/Node JS, optimizing UI/UX analysing multi-terabyte telemetry datasets

Internships:

Research Assistant Intern Jul 2022 – Nov 2023
NUS Human Computer Interaction Lab *Singapore*

- Collaborated with PhDs and Research Assistants on Project Eye gaze, conducting experiments and user studies to analyze large eye gaze datasets and utilizing user gaze to mark boundaries in images
- Conducted comparative analysis of ML models (SVM, Decision Trees) and neural network architectures (CNN, LSTM, Transformer) for EyeGaze improvement, achieving ~99% accuracy

Software Engineer Intern – Full Stack Jan 2019 – Jul 2021
Hewlett-Packard Enterprise *Bengaluru, India*

- Designed UX screens for SEMC using Invision app and Figma, implemented on React JS for client-side development
- Achieved 100% backlog defect clearance as a full stack developer refactoring existing legacy codebase
- Leveraged Pytest for unit testing for quality assurance and Grafana/Kibana for system monitoring in 2 Feature Releases

Software Developer Intern Jun 2017 – Jul 2017
Webnish Software Solutions Pvt Ltd *Bengaluru, India*

- Developed an interactive blogging platform using Atom, achieving a 40% faster deployment rate, demonstrating efficiency
- Implemented user authentication functionalities, enhancing user engagement and trust, while seamlessly managing user inputs with Azure SQL Database to enhance functionality for server-side development

RESEARCH AND PROJECTS

Generative AI Self-Introduction App - Application Development Dec 2023 – Jan 2024

- Created a Generative AI Self-Introduction App, integrating LangChain (for large language models) and OpenAI API for advanced language generation, optimization and enabling personalized interactions with users, using TensorFlow
- Harnessed StreamLit for intuitive GUI design, enhancing the user experience during interactions with the app

Eye-gaze Pattern Recognition, THESIS Jan 2023 – Nov 2023

- Innovated a 98% accurate eye gaze recognition quantitative model using graph deep neural networks and adaptive algorithm design
- Executed novel data processing with a 10-gesture dataset, demonstrating a superior accuracy of 97.67% compared to existing models (ANN, CNN, GRU, LSTM, and GCN), in Pytorch

Big Data News Popularity Analysis Jul 2022 – Nov 2022

- Conducted analysis on 90,000 news items from diverse outlets to assess popularity across social media platforms
- Utilized sentiment lexicon, clustering, and word frequency analysis to gauge news sentiment and identify trending topics
- Generated visualizations of sentiment scores, clustering results, and popularity statistics across different social media platforms using PySpark

Improved Colour Texture Based Face Spoofing Detection, THESIS Aug 2018 – May 2019

- Devised facial fraud detection strategy using component characteristic study and extensive datasets
- Performed feature extraction methods (CoALBP, LBP, LPQ, BSIF) and SVM for cluster identification, visualized on MATLAB
- Achieved quantitative image analysis, published paper in International Journal of Engineering and Advanced Technology, 2019

CERTIFICATIONS

- Microsoft Azure Fundamentals (Cloud service)
- Microsoft Azure AI (Cloud service)
- Data Science and Artificial Intelligence (ACM)
- Applied Machine Learning in Python (Coursera)
- Introduction to data science in python (Coursera)
- Docker & Kubernetes, The Complete Developers Guide

SKILLS

Python | PySpark | SQL | Git | Pytorch | TensorFlow | Pandas | NumPy | Matplotlib | Keras | Scikit-Learn | Jenkins | Azure SQL Database | AWS | Streamlit | Spark | Hadoop | A/B testing | MongoDB | JavaScript | HTML/CSS | React | AngularJs | RESTful APIs | Jira | Azure AI | NLTK (NLP) | Spacy | Seaborn | Plotly | Docker | Kubernetes