SNEHA SINGH

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SUMMARY

Results-driven Software Engineer with 4+ years of experience in Python, AI/ML, and full-stack development. Skilled in building real-time recommendation engines, fraud detection systems, and scalable data pipelines, with expertise in cloud platforms, microservices architecture, NLP, deep learning, and distributed systems, delivering robust, production-ready solutions in dynamic environments.

SKILLS

Programming Languages: Python, Java, JavaScript, SQL, HTML, CSS, R, C, C++, C#
Machine Learning & AI: Supervised & Unsupervised Learning, Deep Learning (CNNs, Transformers), NLP (Text Classification, Sentiment Analysis), Recommendation Systems, Generative AI (LLMs, Prompt Engineering, RAG)
Frameworks & Libraries: TensorFlow, PyTorch, Scikit-learn, Keras, Hugging Face Transformers, Pandas, NumPy, Matplotlib, Seaborn, OpenCV, React
Cloud Platforms & Services: Amazon Web Services (AWS), Google Cloud (BigQuery), Docker, Kubernetes
Databases & Storage: MySQL, PostgreSQL, MongoDB, Cassandra
APIs & Integrations: Flask, Django, gRPC, Third-Party API Integration
Other Skills/ Tools: Software Design Patterns, System Design, Distributed Systems, Unit Testing (PyTest, unittest), Debugging & Profiling, Security Best Practices, Git, GitHub/GitLab, Jenkins, CI/CD Pipelines, Agile & Scrum Methodologies, Jira

WORK EXPERIENCE

PayPal **Texas, USA**
Software Engineer *Jan 2025 – Present*

- Developed a real-time personalized recommendation engine using Python, Flask, and RESTful microservices, leveraging transaction history and behavioral signals, increasing user engagement by 18% and cross-sell conversions.
- Built scalable data pipelines with Apache Kafka and PostgreSQL, enabling real-time ingestion of 1M+ daily transactions and low-latency updates for recommendations and fraud detection.
- Implemented fraud detection models with PySpark and Scikit-learn, integrating real-time scoring into Wallet transactions, reducing fraudulent activity by 25%.
- Automated model retraining and deployment using Docker and Jenkins, while designing Python-based A/B testing dashboards with Tableau, improving feature retention by 15% and supporting data-driven product decisions.

The State University of New York at Buffalo **New York, USA**
Research Assistant *Sept 2024 – Dec 2024*

- Designed and executed research experiments on Large Language Model (LLM) security and hallucination detection using Meta's Llama-3.2-1B, applying Python for model development, fine-tuning, and evaluation.
- Implemented adversarial training and regularization strategies that reduced hallucination scores by 1.6%, strengthening model robustness and factual reliability.
- Developed an anomaly detection pipeline leveraging PyTorch, SentenceTransformers, and the Google Custom Search API, achieving a measurable improvement in data anomaly identification accuracy.
- Performed quantitative analysis of experimental outcomes using NumPy, Pandas, and Matplotlib, and authored detailed technical reports, advancing research in LLM security and trustworthiness.

Oracle **India**
IT Consultant *Oct 2020 – Jul 2023*

- Led 20+ product upgrades and patchset deployments, successfully addressing 95% of client-reported issues and improving overall platform stability.
- Developed and integrated 10+ custom Java APIs and automation scripts connected with backend databases on the Flexcube platform, enhancing operational efficiency by 30%.
- Resolved 50+ complex financial software discrepancies, improving data accuracy and ensuring compliance with financial reporting standards.
- Partnered with cross-functional teams to troubleshoot and resolve high-priority escalations, utilizing Java debugging, SQL tracing, and performance tuning to meet strict SLA timelines.
- Promoted from Associate to Staff Consultant within 2 years for exceptional technical performance.

PROJECTS

Signify – Real-Time ASL Detection Application | Python, Mediapipe, OpenCV, TensorFlow, NumPy, Pandas.

- Developed and deployed a real-time American Sign Language (ASL) detection system using Python, Mediapipe, and OpenCV, achieving over 90% accuracy in gesture recognition. Led data collection, model training, and performance optimization, earning 2nd place among 30+ projects at CSE Demo Days Spring 2024.

EDUCATION

Master of Science Computer Science and Engineering **GPA:** 3.87/4
University at Buffalo, The State University of New York New York, USA