SAMBHAV SHRESTHA

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EDUCATION

St. Joseph's University   **September 2018 - June 2022**
Bachelor's, Computer Science   *GPA: 3.93*
- Relevant courses: Advanced Algorithms & Programming, Advanced Databases, Multivariable Calculus, Linear Algebra,
- Awards: SJC President's Scholar, SJC Honors, Dean's list

PROFESSIONAL EXPERIENCE

HCL Technologies   **New York, NY, USA**
ML Infra Engineer at Meta   *March 2024 - Present*
- Implemented monitoring systems and doctor tool to track model performance in production and set up alerting mechanisms for any model processing related errors like entropy explosions or deviations,
- Worked closely with Research Scientists and ML engineers to understand model requirements and provided infrastructure support for experimentation and testing,
- Implemented Gen AI tool to locate and debug errors during model packing, splitting, lowering, and transformation

Tarifica   **New York, NY, USA**
Software/Data Engineer   *June 2023 - February 2024*
- Built and maintained over 300 web scrapers using Python and BeautifulSoup to capture raw data from various sources, transforming it into structured data stored in PostgreSQL databases for further analysis,
- Designed and implemented ETL pipelines using the Flask framework to filter, process, and transmit high-quality data to downstream systems for analysis and visualization, ensuring accuracy and efficiency,

Amazon   **Seattle, WA, USA**
Software Development Engineer   *July 2022 - March 2023*
- Designed, developed, and monitored live microservices using AWS technologies such as EC2, Lambda, and CloudWatch, enabling seamless operation of Amazon Go and Just Walk Out stores,
- Led the migration and upgrade of a critical service to AWS, significantly reducing operational costs, latency, and support tickets, while enhancing service reliability through improved metrics, alarms, and automated deployment pipelines,
- Delivered high-quality, timely solutions across multiple languages, including Java, Kotlin, Python, TypeScript, and Ruby, in a Linux-based environment, ensuring efficient sprint task completion and superior system performance

Microsoft   **New York, NY, USA**
Data Science Student Research Fellow   *June 2021 - July 2021*
- Conducted an in-depth analysis and extended the study 'Police Complaints' published on the Financial Times article. Investigated the relationships between police officers' and victims' race and gender, analyzing complaint distributions across three major cities: NYC, Chicago, and Philadelphia,

PROJECTS & OUTSIDE EXPERIENCE

GCP Specialization Certificate
- Completed a 5-course Coursera specialization on GCP Compute, Kubernetes, and App Engine, where I deployed VMs, set up networks and load balancers, and automated cloud deployments with CI/CD pipelines

Twitter Sentiment Analysis in R using rtweet (dplyr, tidyverse, ggplot):
- Developed an interactive visualization dashboard that fetches tweets based on user-defined keywords and performs sentiment analysis using a lexicon-based approach.

Stock Price Prediction using LSTM (Pandas, TensorFlow, Matplotlib)
- Developed a Deep Recurrent Neural Network (RNN) utilizing Long Short-Term Memory (LSTM) networks to predict stock prices, leveraging real-time data, and conducted comprehensive time-series analysis

Replication and Extension of article "Police Officer Complaints"
- Conducted an in-depth analysis and extended the study 'Police Complaints' and investigated the relationships between police officers' and victims' race and gender, analyzing complaint distributions across three major cities

SKILLS

- Python, Java, C/C++, AWS, Docker, Google Cloud Platform, JavaScript, Kotlin, Linux/Unix, Pytorch, R, Postgres, MySQL, Neural Networks, Gen AI