HARSHITA CHADHA
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EDUCATION

Master of Science, Computer Science – May 2024
George Washington University - Washington, D.C.
Recipient of the School of Engineering and Applied Science's **Dean's Scholarship**. Actively serving as a **teaching assistant** for a graduate-level big data and analytics course. Specializing in **data science and machine learning**.

Bachelor of Technology, Computer Science and Engineering – June 2022
GGSIP University - New Delhi, India
Consistently **ranked in the top 5%** of the cohort. Served as a **Research Assistant in the CS department**, contributing to Machine Learning research. Demonstrated **excellence across a diverse spectrum of core subjects**, including computer architecture, software development, network principles, and machine learning.

EXPERIENCE

Data Analyst Intern – FinOps Enhancement August 2021 - January 2022
Sanofi

- Drove a **15% cost reduction across 260 internal customer accounts** through proactive cloud cost optimization, **leveraging machine learning** recommendations to identify resource disposal opportunities.
- Accelerated decision-making processes for internal customers by designing and **implementing FinOps-focused data dashboards in Microsoft Excel and Apptio's Cloudability tool**. This initiative led to an impressive **40% reduction in resource retention decision times**, enhancing operational efficiency.
- Facilitated a **seamless transition** during the vendor changeover by **meticulously documenting and translating complex cloud management workflows** from the external FinOps vendor. This comprehensive documentation serves as a valuable resource, ensuring a smooth handover and **effective knowledge transfer.**

Computer Vision Research Intern June 2021 - July 2021
MetFlux Research

- Applied **Python Programming expertise to process and analyze video data**, transforming them into RGB signals and utilizing photoplethysmography techniques to detect vital parameters, including heart rate, SpO2, and blood pressure.
- **Achieved exceptional mean error rates** of 6.8% for heart rate, 1.1% for SpO2, and 1.6% for blood pressure through a combination of techniques, including bandpass filtering, event-related moving averages, and **deep learning**-based Ambulatory Blood Pressure (ABP) waveform prediction.
- **Established a systematic video repository** by collecting and meticulously organizing video samples, facilitating **seamless patient record linkage.**

Data Science & Artificial Intelligence Intern February 2021 - April 2021
Solera Life Sciences

- **Led extraction, cleansing, and integration** of a vast pharmacological dataset, **surpassing 10 million records from diverse sources**, enhancing data accessibility.
- **Guided a team of 5 professionals** to efficiently **prepare and present pharmacological data** for a centralized platform designed for medication cost comparison.
- **Achieved an 85% testing accuracy** by harnessing the "Pocket Sphinx" package within the CMU Sphinx open-source toolkit for **speech recognition.** Applied to identify Indian vernacular accents and medical terminology, this innovation significantly enhanced accessibility and communication.

SKILLS

Programming Languages - Python, R, C/C++, Java, SQL
Libraries - SciPy, NumPy, Pandas, Tensorflow, Keras, PyTorch, scikit-learn, NLTK
Data Visualization and Analytics Tools – Tableau, PowerBI, Microsoft Excel
Database Management Systems (DBMS): MySQL, Oracle DBMS
Big Data Technologies: Hadoop, Apache Spark

SELECTED PROJECTS

- **Recurrent Rhapsody** [Research Report] [Poster] [GitHub]
  Engineered an advanced **deep learning pipeline** for music generation, leveraging **LSTM** and **sentence-BERT models** to compose lyrics and matching audio tracks from extensive text and audio datasets. Leveraged **TensorFlow, PyTorch, and GPU acceleration** for training.
- **ScalNet7** [Presentation] [GitHub]
  Led a three-person team to build a CNN model for early schizophrenia detection using **EEG data**. This involved transforming EEG impulses into RGB scalograms using Morlet Wavelet Transform and implementing a **7-layer deep CNN architecture**, achieving a remarkable **94.4% testing accuracy** and an F1 score of 0.945.

LEADERSHIP & COMMUNITY EXPERIENCE

- **Founder, Meraki Lab (June 2020 - Present):** Established Meraki – An applied research lab to engineer deep learning/AI-based solutions. Developed and patented AI innovations, secured funding from patrons across South Asia, and launched projects, including a women's safety device and an urban flood monitoring drone. Currently leading a 3-member research team on a project that aims to use a unique game-based approach for anxiety reduction. Visit the website here.
- **Technical Lead, Google Developer Student Clubs (August 2020 - July 2021):** Planned inter-societal events, organized hackathons, and conducted hands-on workshops on AI, deep learning, data science, data analytics, etc. to foster analytical thinking. Mentored newbie engineer members and emphasized the importance of teamwork by building collaborative projects.