Nithyashree Senguttuvan

+1 (571) 471-0209 || n.senguttuvan@wsu.edu ||linkedin/nithyashreesenguttuvan || github/nithyashreesenguttuvan

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SUMMARY OF QUALIFICATIONS

Detail-oriented and highly analytical Master's student specializing in Data Engineering, with 2 years of experience in designing, building, and maintaining scalable data pipelines and systems. Proficient in big data technologies, ETL\ELT processes, and cloud platforms, combining academic expertise with hands-on experience. Strong problem-solving skills with a passion for optimizing data workflows to support data-driven decision-making.

EDUCATION AND CREDENTIALS

- ***M.S in Computer Science,*** Washington State University**,** Washington
- ***Databricks Course Certifications* -** Experienced in utilizing the Databricks platform for data analytics, engineering, and machine learning.
  - ➢ Databricks Fundamentals
  - ➢ Getting started with Databricks for Data Analysis, Data Engineering and Machine Learning
  - ➢ Generative AI Fundamentals
- ***NPTEL, IIT's*** - National Programme on Technology Enhanced Learning, Indian Institute of Technology.. Completed courses focused on core computing and data analytics concepts
  - ➢ Data Analytics with Python
  - ➢ Database Management System
  - ➢ Joy of Computing using Python
  - ➢ Problem Solving through programming in C, C++, Java
- ***Google Cloud Platform* -** Acquired proficiency in data science, machine learning, and cloud resource management on GCP.
  - ➢ Dataprep, Dataproc, Dataflow, Kubernetes Engine, Cloud Natural Language API : Qwik Start
  - ➢ Create and Manage Cloud Resources
  - ➢ Advanced Google Analytics

SKILLS

- Programming Languages: Python, R, MySQL (Advanced), C, Java (Intermediate).
- Data Engineering: ETL/ELT , Data Warehousing, Data Pipelines, Data Modeling
- Data Science & Analytics: Data Collection, Data Preparation, Data Visualization, Network Science, Machine Learning, Artificial Intelligence, Predictive Analytics.
- Cloud Platforms: AWS, Azure, Google Cloud Platform
- Databases: MySQL, PostgreSQL
- Tools: Git (GitHub, GitLab), Kubernetes, SAP ERP, Data Stewardship Platform, Azure Databricks, ServiceNow, Jira (ITSM Tools)
- Data Visualization: Tableau, Power BI
- Operating Systems: Linux, Windows
- Advanced Technologies: Large Language Models (LLM), Generative AI

PROFESSIONAL EXPERIENCE

Astrazeneca, Chennai, India | Junior Engineer (Full time) | March 2021 - August 2022

- *Pharmaceutical Data Pipeline*
  - ➢ Pipeline Development: Engineered scalable data pipelines for integrating and processing large datasets from pharmaceutical production, ensuring seamless data flow and integrity.
  - ➢ ETL/ELT Processes: Streamlined ETL/ELT workflows for efficient extraction, transformation, and loading of production data into centralized systems, reducing manual efforts.
  - ➢ Big Data & Cloud Integration: Applied Apache Spark for large-scale data processing and utilized Azure and AWS for cloud-based deployment and management, linking on-premises systems with cloud platforms.
  - ➢ Agile Collaboration: Worked closely with supply chain and production teams to ensure timely access to critical data, improving decision-making processes. Ensured iterative development and continuous integration of data engineering solutions.
- *Clinical Trial Data Integration*
  - ➢ Data Integration: Developed robust data pipelines for clinical trial datasets, focusing on integration, processing, and ensuring data quality across various platforms.
  - ➢ ETL/ELT Optimization: Enhanced ETL/ELT processes to manage clinical trial data from diverse sources efficiently, automating tasks to improve workflow productivity.
  - ➢ Compliance & Governance: Established data quality checks and validation processes to adhere to GxP and GDPR standards, supporting high data integrity and governance.
  - ➢ Agile Practices: Participated in Agile methodologies to iteratively develop and refine data engineering solutions, aligning with clinical research needs

Washington State University, Pullman, Washington | Graduate Teaching Assistant(Part time) | January 2023-May 2024

- Provided educational support and facilitation in Computer Science, collaborating with professors (Prof. Bolong Zeng, Prof. Yan Yan, Prof. Jeremy Thompson) to ensure smooth course execution.
- Conducted research and enhanced assignments for System Programming (Java), leading hands-on labs to reinforce practical skills and theoretical concepts.

INTERNSHIP

- ***Zinnov Management Consulting Private Limited (Draup), Coimbatore, India | Market Research Intern | July 2020,*** Managed data collection, preprocessing, and management, ensuring data integrity and accessibility for analysis by employing efficient methods to gather and organize diverse datasets.
- ***TATA Elxsi, Bengaluru, India | Intern | May 2019,*** Applied Deep Neural Networks to enhance Autonomous Vehicle performance, gaining proficiency in Artificial Intelligence from Artificial Neural Networks to advanced Deep Learning techniques.

PROFESSIONAL TRAINING

- ***Techzy IT Solutions, Coimbatore, India | May 2023 - July 2023,*** Proficiently applied Data Science and Machine Learning fundamentals with Python in a live project during an internship, translating theoretical concepts into practical solutions.
- ***Uniq Technologies, Coimbatore, India | December 2018,*** Built foundational skills in design and development tools, emphasizing their application throughout the Software Development Life Cycle(SDLC).

PROJECTS

- ***Personal Music Trends Analysis with Spotify* | *Spring 2024***, Conducted a network science project at Washington State University, utilizing the Spotifyr package and Spotify API in R for in-depth data exploration and visualization. Employed advanced techniques to derive insights and support strategic decision-making.
- ***Comment Toxicity Identification Model* | *Spring 2024*,** Engineered a Neural Network model for detecting and categorizing comment toxicity, leveraging natural language processing techniques and the Gradio API to address challenges in online content moderation at Washington State University.
- ***Anomaly Detection in ECG Data Using Machine Learning Techniques* | *May 2024*,** Conducted research on Anomaly Detection in ECG data using Isolation Forest and Seasonal Ratio Score (SRS) with Autoencoders, in a project at Washington State University under Prof. Venkata Janardhan Rao Doppa.
- ***Music Genre Classification* | *Fall 2022,*** Designed a machine learning project using K-Nearest Neighbors (KNN) to categorize music genres within the GTZAN dataset. Performed feature analysis across ten genres to accurately classify music samples, showcasing expertise in machine learning techniques and dataset manipulation at Washington State University.
- ***Uncovering "The Great Resignation"* | *Fall 2022*,** Created a machine learning model to analyze attrition rates and their impact across industries at Washington State University, focusing on data-driven insights into workforce trends.
- ***Cardiovascular Disease Prediction Using Particle Swarm Optimization* | *March 2021,*** Conducted a bachelor's thesis focused on developing a predictive model for cardiovascular disease using Particle Swarm Optimization (PSO). Employed advanced optimization techniques to enhance model accuracy and reliability in predicting disease risk based on patient data.

PUBLICATIONS

- **Artificial Intelligence and its Application in Cardiovascular Disease Management | 2021** — *Machine Learning and Systems Biology in Genomics and Health*.. pp 189 - 236
- **Coronary Artery Disease Prediction by Unsupervised Learning and Particle Swarm Optimization | March 2021,** *First International Conference on Next Generation Computing Systems (ICNGCS 2021)*
- **Survey paper on Generative Adversarial Neural Networks | September 2019**, *Sixth National Conference on "Recent trends in Computer Science"*

PROFESSIONAL AFFILIATIONS

- **Graduate Society of Women Engineers**, *Professional Development Coordinator* | August 2022 - May 2024
- **International Association of Engineers**, *Member* | March 2019 - April 2021
- **Google Developer Group**, *Member* | March 2018 - April 2021