NANDHANA SURESH KUMAR

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EDUCATION

The University of Texas at Dallas, Richardson, TX — Expected May. 2026
Master of Science, Computer Science — 3.5/4.0
- Database Design, Machine Learning, Statistical Methods for Data Science

Sri Venkateswara College of Engineering, Chennai, India — May. 2024
Bachelor of Engineering, Computer Science and Engineering — 3.8/4.0

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, SQL, HTML5, CSS3, JavaScript
Tools/Frameworks: TensorFlow, Flask, PyTorch, AngularJS, Tableau, Microsoft Excel
Specializations: Machine Learning, Data Science, Cybersecurity, Web Development

WORK EXPERIENCE

Servion Global Solutions, Chennai, India — Jun. 2023 – Jul. 2023
Web Development Intern
- Developed and programmed web applications using JavaScript, PHP, CSS3, HTML5, MySQL database.
- Implemented new features and a responsive design, boosting mobile usability by 30 % using agile methodologies.
- Improved site's performance by reducing page load time from 5 seconds to 2 seconds utilizing Content Delivery Network.

Tito Engineering Products & Services, Chennai, India — Apr. 2023 – May. 2023
Data Science Intern
- Streamlined data pipelines, improving query execution speed by 15% and enhancing data accessibility for analysis.
- Developed predictive models with Python (Scikit-learn), boosting accuracy by 10% and cutting processing time by 20%.
- Analyzed customer and operational data to uncover trends and support strategic decision-making with actionable insights.

Kaashiv Infotech, Chennai, India — Feb. 2022 – Mar. 2022
Cybersecurity Intern
- Analyzed Denial of Service (DOS) attacks, password cracking, encryption and decryption.
- Scanned websites for malware and security risks; resolved safety and technical issues encountered.
- Organized hands-on technical in computer forensics and penetration testing labs for more than 40 participants.

ACADEMIC PROJECTS

High Fidelity 3D Reconstruction from 2D Images: Advancing Deep Learning Applications — Sep. 2024 – Dec. 2024
- Developed a pipeline using PIFuHD and PyTorch3D to convert 2D images into detailed 3D models, optimizing precision with Chamfer Distance and Laplacian Smoothing.
- Enhanced model generalizability by curating and augmenting datasets using photogrammetry scans, synthetic backgrounds, and transformations
- Leveraged CNNs and pixel-aligned implicit functions to achieve high-resolution 3D reconstructions, scalable for AR/VR, gaming, and robotics applications.

File-Based Database Engine Development: Implementing B-Tree Storage Solutions — Sep. 2024 – Dec. 2024
- Developed a database engine inspired by SQLite, enabling efficient storage and retrieval using page-based B-tree files.
- Designed and implemented SQL commands like CREATE TABLE and SELECT, enhancing usability with a modular CLI.
- Configured scalable storage with a 512B page size, achieving robust performance for structured data management.

Honeywords Based Password Management System, Sri Venkateswara College of Engineering — Jan. 2024 – May. 2024
- Developed a honeyword-based password management system using Python and Flask, improving security by generating decoy passwords and integrating SHA-512 for enhanced protection against brute-force attacks.
- Implemented a honeychecker module, boosting intrusion detection by 20% and improving breach detection by 30% through simulated attack scenarios.

E-commerce Product Review System, Sri Venkateswara College of Engineering — Jul. 2023 – Sep. 2023
- Analyzed 25,000+ reviews with Python, boosting model performance by 20% and visualizing sentiment trends.
- Developed a logistic regression model with TF-IDF, achieving 85% accuracy and validating via confusion matrices.

Diabetes Prediction using Machine Learning, Sri Venkateswara College of Engineering — Feb. 2022 – May. 2022
- Developed a methodology to predict Type 2 Diabetes risk using a dataset of relevant diagnostic measurements.
- Implemented machine learning algorithms (Logistic Regression, Random Forest, and SVM), achieving an accuracy of 78%.

SVCE Chatbot, Sri Venkateswara College of Engineering — Apr. 2022 – Jul. 2023
- Employed Flutter, Dialogflow API and Voice Streaming Recognition to develop a Chatbot application for the faculties and students at Sri Venkateswara College of Engineering.
- Integrated machine learning algorithms and natural language processing for accurate intent recognition and dynamic response generation.