

# SURYODAYA B. SHAHI

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## EDUCATION

University of Maryland College Park

College Park, Maryland

*M.S. in Data Science*

*Graduation, May 2026*

- o **Related Coursework:** Data Science, Probability Statistics, Machine Learning, NLP, Data Representation and Modeling, Communication in Data Science and Analytics, Big Data Systems, Algorithms for Data Science.

Delhi Technological University (formerly DCE)

Delhi, India

*B.Tech in Software Engineering*

*Graduated, May 2023*

- o **Related Coursework:** Data Structures & Algorithms, Objects & Design, Computer Organization & Programming, Compiler Design, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics & Applications, Software project Management, Computer Network.

## EXPERIENCE

Macquarie University

(Remote) Sydney, Australia

*Research Intern*

*July 2022 – Oct 2023*

- Collaborated with **Dr. Usman Naseem** to improve AI-driven content moderation systems.
- Built machine learning models (**BERT, VGG19, ResNet50**) for NLP and image classification, categorizing over 5,000 memes.
- Optimized a large-scale multilingual meme dataset for sentiment analysis, reducing processing time and enhancing model efficiency.
- Integrated multimodal approaches (**VGG16 + BERT**), boosting hateful content detection by 40%.

Nepal Electricity Authority (Government Entity)

Kathmandu, Nepal

*IT Intern*

*May 2022 – July 2022*

- Centralized inventory operations with predictive analytics, optimizing accuracy and resource distribution.
- Created predictive model using **Classification algorithms** like **Random Forest** and resource allocation on a Kaggle dataset.
- Applied K- Means Clustering techniques to enhance inventory management, improving process efficiency by 50%.

## SKILLS

- **Programming Languages:** Python (Adv.), C++ (Int.), C (Int.), HTML/CSS (Int.), MATLAB (Int.)
- **Data Science & Machine Learning:**
  - o **Framework & Libraries:** TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
  - o **Techniques:** Large Language Models (LLMs), BERT, GPT, Transformers, OpenCV, CNNs, RNNs, Object Detection, GenAI
  - o **Databases:** SQL, NoSQL
  - o **Data Preprocessing:** Data Wrangling, Data Visualization, Feature Engineering
- **Software Development & Engineering:** RESTful APIs, Software Project Management, OOP, Agile Methodologies
- **Tools:** Jupyter Notebooks, VS Code, Anaconda, GitHub, AWS, MongoDB, PyCharm, Git

## PROJECTS

Analysis Towards Classification of Infection & Ischemia of Diabetic Foot Ulcers using Machine Learning

Delhi, India

*Team Member*

- Developed a **SMOTE** and ensemble model (**stacking**) **creating a meta-model** for improving the classification accuracy by 15% for detecting infection and ischemia in diabetic foot ulcers, aiding early diagnosis and improving patient outcomes.
- Contributed to a scalable solution that enhances healthcare efficiency and reduces costs through timely intervention.

Deep Learning methods for Vehicle Trajectory Prediction (Published in ICICNIS 2023)

Delhi, India

*Co-Author*

*Oct 2022– March 2023*

- Co-authored a paper on deep learning-based trajectory prediction for autonomous vehicles ([DOI: 10.1007/978-981-99-6586-1\\_37](#)).
- Conducted a systematic review of 63 research articles, synthesizing insights from 43 high-quality studies.
- Proposed IoT-integrated prediction techniques for real-time traffic monitoring and autonomous navigation.

## ACADEMIC SERVICES, AWARDS AND LEADERSHIP

- **Reviewer :** ACM TheWebConf 2025 Workshop MM4SG, Paper title:
  1. "Cross Platform MultiModal Retrieval Augmented Distillation for Code-Switched Content Understanding"
  2. " MVis4SID: Multimodal Visual Interactive System for Suicide Ideation Detection"
- **ICCR Scholar (2019-2023)** – Awarded **full scholarship** by the Indian Council for Cultural Relations to study at DTU
- **CTO - Kaushala (EdTech Startup)** – Leading an Ed-Tech Company with K-12 skill education initiatives.

## CERTIFICATES AND EXTRA-CURRICULAR ACTIVITIES

Online Courses

1. Google **IT Automation with Python Professional Course** 2. **Introduction to Self-Driving Cars** (University of Toronto) 3. **Cryptography I** (Stanford University) 4. **Basic Statistics** (University of Amsterdam) 5. **Introduction to Sustainability** (University of Illinois at Urbana-Champaign)

Extra-curricular

- **Gold Medalist** in Science Olympiad organized by TechFest **IIT Bombay** in November 2018,
- **Sho-Dan** (First Degree Black Belt) in Shotokan Karate-do, **examined by Hirokazu Kanazawa & a Silver Medalist in SKIF**, affiliated with **Nepal Olympic Committee**).