

SURYODAYA B. SHAHI

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EDUCATION

University of Maryland College Park

College Park, Maryland

M.S. in Data Science

Dec 2025

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

Harvard University

Division of Continuing Education (Concurrent Enrollment: Summer Semester)

Cambridge, MA

Related Coursework: DGMD S-14 Wearable Devices & Computer Vision

June 2025 – Aug 2025

Grade : A

Credit : 4.0 / 4.0

Delhi Technological University (formerly DCE)

Delhi, India

B.Tech in Software Engineering

May 2023

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.

SKILLS

- **Programming:** Python (Adv.), C++ (Int.), C (Int.), MATLAB (Int.), R (Int.), HTML/CSS (Int.)
- **Data Science & AI Framework and Tools:** TensorFlow, PyTorch, Keras, Scikit-learn, SpaCy, NLTK, Pandas, NumPy, Matplotlib, Seaborn, Hugging Face; VLMs, VLA pipelines, RLHF & DPO, CNNs, RNNs, Object Detection, NLP, TLMs, LLMs, QLoRA/LoRA, GPT, Transformers, OpenCV, Evaluation & benchmarking, Data Wrangling, Feature Engineering, Visualization.
- **Robotics & Computer Vision:** ROS Noetic; Meta Aria SDK (Gen 1); UFactory xArm6; Real-Time VLM/VLA Integration.
- **Data & Databases:** SQL (MySQL), NoSQL (MongoDB), Neo4j; Cloud Computing
- **Software & Tools:** RESTful API Design, OOP, Agile Methodologies; Git/GitHub, Docker, PyCharm, Weights & Biases, n8n.

EXPERIENCE

Perception & Robotics Group, University of Maryland

College Park, MD

Research Assistant - Part time

September 2025 – Present

- Building a project that bridges computer vision and music by analyzing violin performance through temporal pose retargeting from monocular video to SMPL-X for fine-grained bow-arm & wrist dynamics

Harvard Ophthalmology AI & Robotics Lab & Schepens Eye Research Institute

Boston, MA

AI Research Intern - Full time

May 2025 – September 2025

- Built cutting-edge AI & robotics research under **Dr. Mengyu Wang** in the Harvard AI & Robotics Lab, focusing on ophthalmology and **assistive vision-language applications for visually impaired.**
- Built a low-latency vision-language pipelines for **Meta's Project Aria Gen 1** smart-glasses screening state of the art VLM models
- Curating a first of its kind **large egocentric dataset** to benchmark and evaluate AI-powered smart devices to assist people with low vision in real world scenarios. (**Publishing soon**)

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%

PUBLICATIONS, ACADEMIC SERVICES, AWARDS AND LEADERSHIP

- I. **Publication :** Co-Authoring "Deep Learning methods for Vehicle Trajectory Prediction" **DOI: 10.1007/978-981-99-6586-1_37**
- II. **Perplexity.ai :** Campus Partner for University of Maryland, College Park : <https://www.perplexity.ai/studentonboarding>
- III. **Reviewer :** ACM TheWebConf 2025 Workshop MM4SG, Paper title:
 - A. "Cross Platform MultiModal Retrieval Augmented Distillation for Code-Switched Content Understanding"
 - B. "MVis4SID: Multimodal Visual Interactive System for Suicide Ideation Detection"
- IV. **ICCR Scholar (2019-2023)** – Awarded **full scholarship** by the Indian Council for Cultural Relations to study at DTU
- V. **CTO - Kaushala (EdTech Startup)** – Built cohort-based learning marketplace; Scaled to several **thousand users and 6 school partnerships.**
- VI. **Gold Medalist** in Science Olympiad organized by TechFest IIT Bombay in November 2018