

Sougato Bagchi

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Objective

Full-time software engineering in the area of Machine Learning and Computer Vision.

Skills, Abilities & Certifications

- Programming Languages: Python, C++, MATLAB, SQL
- Frameworks: PyTorch, scikit-learn, TensorFlow/Trax, SLAM
- Hardware: RGB Camera, IMU, LiDAR
- OS: Linux, Windows, Robot Operating System (ROS)
- Certifications: Financial Markets - Coursera (rebrand.ly/omv5lx4)

Experience

Research Assistant | University at Buffalo | Buffalo, NY

Feb 2022-Aug 2023

- **Image processing:** ML Vision Model for surveillance trained using Enhanced Super Resolution Generative Adversarial Network (ESRGAN) technique and robot navigation using that model. Check my dissertation on ProQuest (rb.gy/nldkb).
- **Human Robot Interaction:** Augmented a simple order-driven robot with sensory capabilities and reactions, such as Feedback Learning, Natural Language Processing and Audio-Visual Recognition. Project work is available on GitHub (rb.gy/b4gwk).
- **Robot Navigation:** Location Error Optimization/Reduction using Absolute Trajectory Error (ATE) methodology. My white paper is available at the link (rb.gy/lwflj).
- **Biometrics using Human Hand Vein Pattern:** ML Model to recognize human vein patterns on the dorsal side of the palm using Neural Nets. Please find the IEEE publication at the link (rb.gy/w8937).
- **Teaching Assistant:** Graded and assisted students on “Robot Operating System (ROS)”, “probabilistic localization of robots” and “Linux intro” projects for the course of CSE 468/568: Robotics Algorithms.

Machine Learning Engineer, Intern | COZEVA | Fremont, CA

Jun 2022-Aug 2022

- Data Engineering to process large Data Sets (patient medical data).
- Identification of Relevant Features for Machine Learning.
- Neural Network Model to predict medical care gaps.
- Associative Rule Mining to identify correlation between social demographics and care gaps.
- Technologies: Data Engineering · Python (Programming Language), [Scikit-learn](https://scikit-learn.org/)

Salesforce Developer | Tata Consultancy Services | Kolkata, India

May 2019-Nov 2020

- Collaborated in a cross-functional team of approximately 50 people actively engaging in client interfacing, conducting requirement analysis, and contributing to full stack development on Salesforce Lightning-based webpages using SQL and Apex programming languages.
- Data Visualization and Analysis using Salesforce Einstein and MS Excel.

Education

University at Buffalo | Master of Science, Computer Science | Buffalo, NY | Major GPA: 3.5/4

Aug 2023

Specialization: Computer Vision for Robotics, Deep Learning in Image Processing

UEM Kolkata | Bachelor of Technology, Computer Science | Kolkata, India | Major GPA: 3.7/4

Apr 2019

Specialization: Machine Learning, Image Processing with some published research papers in Springer Oct 2018.

- Predicting survivability of patients having Hepatocellular Carcinoma based classification model like K-nearest and DNN models (rebrand.ly/3skpmbob)
- Using regression models to predict rainfall vs Humidity, Temperature, and other weather factors. (rebrand.ly/mp29aua).