# Sougato Bagchi

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ML Engineer with a diverse experience in software and healthcare industry. Passionate about Financial Markets.

## EDUCATION

M.S in Computer Science, University at Buffalo, NY | GPA: 3.5/4.0

Aug. 2021 - Aug. 2023

B.Tech in Computer Science UEM, Kolkata, India

Aug. 2015 – Apr. 2019

## SKILLS

Certifications : Financial Markets (with Honors), Issued Jan 2021

Languages : Python, R, C, C++, MATLAB, SQL

Frameworks: PyTorch, Tensorflow/Trax, CV2, Keras, SciKitLearn, HuggingFace, OpenAI Whisper, Google TTS

Data Tools : MySQL, PostgreSQL, MongoDB, JSON, XML, MS Office(Excel-VBA), Tableau Others : Git, FastAPI, Apache Spark, Docker, Kubernetes, AWS, Azure, LLMOps

#### EXPERIENCE

### Machine Learning Engineer

Cozeva Seattle, WA

• AI Assistant Development: Led the creation of a proprietary agentic AI assistant using LLM models, tailored to the organization's data ecosystem.

• Database Architecture: Designed and integrated a NoSQL-based vector database for efficient text and image vector embedding retrieval.

• Healthcare Data Analysis: Applying advanced statistical data analysis, created scorecard and reports.

#### Research Assistant

Feb. 2022 – Dec. 2023

Dec. 2023 – Present

University at Buffalo

Buffalo, NY

- Image processing: Generative Model trained, which can be utilized in surveillance, robot navigation, and other areas. IEEE publication rb.gy/qnja08.
- Human-Robot Interaction: Augmented a simple order-driven robot with capabilities, such as Feedback Learning, NLP, and Audio-Visual Recognition. GitHub rb.gy/isc4x9.
- Robot Navigation: Location and Navigation Error Optimization of autonomous robots. White paper rb.gy/0729ic.
- Biometrics: ML Model trained to recognize human vein patterns on the dorsal side of the palm using Neural Nets. IEEE publication rb.gy/5be87k.
- **Teaching Assistant**: Graded and assisted students on various projects for the course CSE 468/568: Robotics Algorithms.

#### Machine Learning Engineer, Intern

Cozeva

Jun. 2022 – Aug. 2022

Fremont, CA

- Engineered data pipelines for the robust processing of extensive datasets, specifically focusing on patient medical records to support healthcare analytics.
- Extracted critical features for machine learning applications, pinpointing key variables within complex medical data to enhance predictive modeling.
- Conducted associative rule mining to uncover patterns linking social demographics to healthcare service disparities, providing insights into population health management.

## Assistant Systems Engineer

May. 2019 - Nov. 2019

 $Tata\ Consultancy\ Services$ 

Kolkata, India

- Collaborated in a cross-functional team of approximately 50 people actively engaging in **client interfacing** and conducting **requirement analysis**.
- Specialized in order processing and insightful data analytics within the healthcare sector.
- Employed SQL for database management and leveraging MS Excel for advanced data interpretation and reporting.