

Swaroop Nayak

📍 Boston, MA — ✉️ swaroopnayak1@gmail.com — ☎️ (857)-426-8168
🌐 [LinkedIn](#) — 🏠 [GitHub](#)

Technical Skills

Languages: Python, Java, C#, C, C++, SQL, JavaScript, TypeScript, HTML5, CSS3

Frameworks & Tools: .NET, React, Selenium, SpecFlow, Cucumber, JUnit, NUnit, Docker, Kubernetes, Azure DevOps, Git

Data Science & ML: NLP, TensorFlow, PyTorch, Scikit-Learn, MongoDB, MS SQL Server, Grafana, Prometheus

Professional Experience

Software Engineer in Test (SDET-2)

Mar 2024 – Dec 2025

Alter Domus (Remote, Mumbai, India)

- **Architected a scalable automation platform** using **C#/.NET**, supporting 20+ microservices and facilitating technical architecture decisions.
- **Engineered a parallelized execution engine** for CI/CD, reducing feedback loops by **40%** and accelerating production cycles.
- **Developed a data-driven prioritization algorithm** using historical metadata, increasing defect detection efficiency by **20%**.
- **Architected containerized environments** using **Docker and Kubernetes** to ensure environment parity across production.

Software Engineer in Test (SDET-1)

May 2023 – Mar 2024

Alter Domus (Remote, Mumbai, India)

- **Optimized backend validation** by developing complex CRUD queries in **T-SQL** and **MongoDB** to resolve bottlenecks.
- **Automated CI/CD workflows** in Azure DevOps, streamlining builds and deployments across multiple environments.
- **Monitored system reliability** using Grafana and Prometheus; resolved cluster-level issues within Kubernetes.

Associate QC Engineer

July 2022 – May 2023

Deloitte - USI (Bengaluru, India)

- **Built automated regression suites** using **Selenium with Java**, decreasing manual testing effort by 50% for core modules.
- Managed version control and collaborative development workflows using **Git** within an Agile/Scrum environment.

Data Science and Machine Learning Intern

Feb 2021 – July 2021

Chatur Ullu Lab, MIT WPU (Pune, India)

- **Developed an AI classification model** using TensorFlow to identify 17 owl species, achieving **85.3% accuracy** through **Transfer Learning** with DCNNs (ImageNet).
- **Architected an ETL pipeline** using **BeautifulSoup4** to scrape audio metadata from xeno-canto, curating a high-quality dataset of bird call repositories.
- **Engineered audio preprocessing workflows** including re-sampling, splicing, and augmentation; converted signals into **Mel-Spectrograms** for optimized feature extraction.

Education

Northeastern University, Boston, MA

Jan 2026 – (Exp) Dec 2027

MS in Computer Science (Coursework: Program Design, DBMS)

Maharashtra Institute of Technology - World Peace University, Pune, India

July 2018 – June 2022

B.Tech in Computer Science and Engineering (GPA: 9.59/10.0)

Projects & Research

Publication: Whose Hoot? Owl Call Recognition

[Link](#) 

Jan 2022

- Developed a DCNN model achieving **85.3% accuracy** identifying species using TensorFlow and Mel-Spectrograms.
- Automated data collection using **BeautifulSoup4** and processed raw audio datasets in Python.

Amazon Product Review Summarizer

Python, PyTorch, BERT

- Developed an NLP pipeline using **LSTMs (94.8% accuracy)** and BERT to extract sentiment insights from customer feedback.
- Optimized summarization quality via clustering and weak reference extraction (ROUGE-1: 0.19, ROUGE-2: 0.085, ROUGE-L: 0.18).

Awards & Achievements

- **Innovator Award (2024):** Recognized for framework optimization and CI/CD architecture at Alter Domus.
- **Best Squad Award (2023):** Awarded for exceptional team collaboration and high-velocity delivery in Agile SDLC.