

ARNAB GHOSH

SENIOR TECHNOLOGY ANALYST (DATA SCIENCE & IOT) , ACCENTURE INNOVATION HUB



EXPERIENCE

Predictive maintenance at edge | ML Engineer | Accenture

- Responsible for building and deploying a CNN-based deep learning image classifier at the edge for bad quality detection, with the goal to detect bad quality products using computer vision **which has increased productivity by 46%**.
- Responsible for building and understating **Audio-based anomaly detection** & worked in a team to **collect datasets, building a deep learning model** to detect the audio-based anomaly and **deploying it to edge**, hence **saving 85% downtime** of the factory.

Digital Human Twin | ML Engineer | Accenture

- Responsible for building end to end ML pipeline for **predicting heart attack**, successfully created a model which was 89 % accurate.
- Deployed the model in an azure virtual machine with docker.

The Retail Store Of Future | IoT & ML Developer | Accenture

- Working in a team, to build and deploy a **computer vision solution** that can help a **leading retail chain to detect the freshness, and ripeness of fresh produce items in their store**.
- Deployed the **face detection and blur API at the edge**, which can detect and blur faces **within 0.2 seconds**.

Advance driver assistance | PGD Student | University of Hyderabad

- Created own custom dataset for the problem, explored various challenges in dataset creation and overcome them.
- Built an image classification model and deployed it in an edge device with the **accuracy of 93.7%**, after model quantization with state of the art edge deployment.

TenXR, Draftfox , I-center | IoT & Edge Dev | Accenture

- Led the IoT & edge** team for building **Accenture Tactical edge navigation & extended reality platform (TEN-XR)**, helped the team to build a simulator that **reduced 70% efforts** of actual testing scenario.
- Implemented custom **Deadbanding** solution for industrial IoT on Azure IoT edge, the module was able to reduce device to cloud messages by up to 70%, **saving the cost up to 64%** in the **incenter project**.

Innovation & Research | R&D Engineer | Accenture

- Worked as an active team member in the R&D group, **writing PoV & white papers** on various cutting edge topics.
- Worked in the team of inventors to analyse and file patents for any potential idea on behalf of Accenture.
- Build various prototypes on ML & IoT and how to deploy them at the edge with scale efficiently.

EDUCATION

- Diploma in **Artificial intelligence and machine learning**, University of Hyderabad (UoH) [2022]
- Bachelor of technology ECE**, west Bengal university of technology with 8.8 DGPA, including an internship at **DRDO Hyderabad** [2018]

SUMMARY (3.5 YEARS)

A curious learner & technology enthusiast is solving the industry's **most challenging problems using data science (Machine learning & Deep learning) & IoT, with strong analytical & logical skills, looking for opportunities in the data science domain**, where he can collaborate, learn, innovate, solve the complex business problem & build solutions at scale to create an impact.

SKILLS

DATA SCIENCE

- Concepts:** EDA, Machine learning techniques, deep learning techniques, computer vision, deploying AI solutions at the edge & cloud.
- Tools:** Tensorflow, OpenCV, NumPy, pandas, Azure ML studio, scikit-learn

DEPLOYMENT

- Azure IoT Edge (SOTA edge deployment)
- Docker | Azure container Instance
- RestAPI (flask)

IoT (Internet Of Things)

- Skills & Concepts:** Azure IoT, Azure IoT Edge, IoT & edge computing, Industrial IoT.
- Protocols:** MQTT, AMQP, HTTPS
- IoT hardware:** AI@Edge hardware, ESP-32, Raspberry PI, Arduino

PROGAMING LANUAGE

- Python

CERTIFICATIONS

- Microsoft certified Azure AI Fundamentals (AI-900)
- Microsoft certified Azure IoT Developer(AZ-220)
- Microsoft certified Azure Fundamentals (AZ- 900)

ACHIEVEMENTS & RECOGNIZATION

- Speaker of a national conference "IoT Show India" twice on IoT, Edge, AI & Digital twin
- Published a magazine in one of the biggest international magazines. ([link](#))
- Winner of multiple Awards and innovation contests in Accenture including ACE and GTIC-2020(biggest innovation contest in Accenture.

INTERESTS

Photography || Film making || Cooking