# Deepratna Awale

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## SUMMARY

*Generative AI* and *Machine Learning Engineer* with *2 years* of industry experience and an *IBM Data Science Professional Specialization*, one of the top certifications in data science. At Tapestry Video AI, optimized *video diffusion* workflows by *40%*, *trained diffusion models*, and deployed *full-stack AI applications*. At Axiom Softech, reduced *ETL* time by *35%* and improved query performance by *40%* using *AWS Redshift*.

**Key Skills**: Generative AI, Machine Learning, Data Science, Python, TensorFlow, PyTorch, AWS, Data Pipelines, ETL, Predictive Analytics.

## WORK EXPERIENCE

**Generative AI Engineer,** Tapestry Video AI, Mountain View, CA, USA                  Oct 2024 – Current

- Created, maintained and optimized workflows by approx. *40%* for *inpainting* on TikTok style videos.
- *Trained* and *finetuned* custom opensource *diffusion models* on UGC dataset to produce TikTok style content.
- Wrote *Python* scripts to build *LLM agents* for analyzing product pages and increase *CTR*.

**Machine Learning Engineer,** Axiom Softech Pvt. Ltd., Nagur, MH, India                  Oct 2021 – Sep 2022

- Optimized *Data Pipelines* by cut *ETL* time by *35%*, improving data availability for downstream models.
- Architected and managed a centralized *data warehouse AWS Redshift*, reducing query times by *40%* for BI teams.
- Designed *PyTorch* and *TensorFlow* ML models, improving customer engagement by 20% by segmentation.
- Deployed ML apps on *AWS* using *EKS, S3*, and *Sagemaker*, achieving 99.9% uptime and cutting costs by 25%.

**Team Lead,** IIT Bombay, Mumbai, MH, India                  Aug 2021 – Sep 2021

- Led two teams: 5 *C++* developers and 5 *Python* developers, achieving a *50% increase* in deployment efficiency
- Developed Udaan, a *C++* application with *QT Framework*, enhancing *OCR* output correction for Indian scripts.
- Implemented a feature reducing correction time by approx. 30% across files, projects, and future occurrences.

**Data Analyst Intern,** Axiom Softech Pvt. Ltd., Nagur, MH, India                  Jan 2021 – Jul 2021

- Employed *Python* to automate *data pipelines*, reducing manual cleanup by *40%* and achieving *98%* data accuracy.
- Engineered *forecast models* (*Scikit-learn, Statsmodels*), to improve accuracy by *24%* for business decisions.
- Designed *interactive dashboards* with *Tableau* and *Power BI*, reducing report generation time by *50%*.

**Intern,** APS Microtech, Nagpur, MH, India                  May 2019 - Jun 2019

- Developed sample Java-based a standalone application for a Hospital Management System called 'Favaunt'.
- Learnt to utilize *Apache Derby* and *Java Swing* library to create a database and GUI in a modular fashion.

## OPEN SOURCE

**Auto Express**                  Jan 2024 - May 2024

- Created an application that renders 28 expressions on any given image using A1111 *Stable Diffusion* Web UI *API*.
- Applied *inpainting* with *diffusion models* to perform localized denoising guided by *Grounding DINO*.
- Result is a one-click solution for *chatbot emotion* display, optimizing the sprite creation process by 91.67%.

## SKILLS

- **Programming Languages:** Python, Java, C++, JavaScript, SQL.
- **Domains:** Generative AI (LLMs & Diffusion), Machine Learning, Data Science.
- **Frameworks:** TensorFlow, PyTorch, Keras, QT Framework, Flask, Django, FastAPI, PySpark, NextJS.
- **Libraries:** Pandas, NumPy, Matplotlib, Sci-kit Learn, Librosa, OpenCV, Pillow, Streamlit, Selenium, Beautiful Soup.
- **Platforms:** Ubuntu/Linux, Windows, GCP, AWS, Azure.
- **Tools:** Tableau, Power BI, Docker, Jenkins, Git, GitHub, Jira, Stable Diffusion.

## EDUCATION

**MASc, Computer Engineering,** Memorial University of Newfoundland, Canada                  2024

**BEng, Information Technology,** RGCER, Nagpur, MH, India                  2021

## CERTIFICATIONS

**IBM** Data Science Professional Specialization                  2019

**IIT Madras** Programming, DSA Using Python                  2019