Akhil Negi

Manager
Data & Analytics

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Education

G.L. BAJAJ INSTITUTE OF TECHNOLOGY
Bachelor of Technology
(Electronics and Communication)
Graduated May 2012

ASN Sr. Sec. School
Senior Secondary (CBSE)
Graduated March 2007

Skills

Programming language

Python:	★★★★★

Tools

Jupyter	★★★★★
Anaconda	★★★★★
Pycharm	★★★★★
VSCode	★★★★★
ArcGIS	★★★★★
QGIS	★★★★★

DL/ML Stack

DL algorithms	★★★★★
Pytorch	★★★★★
Fastai	★★★★★
Transformers	★★★★★
Keras	★★★☆☆
Pyspark	★★★☆☆
Pandas	★★★★★
ArcGIS Python API	★★★★★
GDAL	★★★★☆
Langchain	★★★★☆
Llama Index	★★★★☆
Unstructured	★★★★☆

Cloud platforms:

AWS	★★★★★
Azure	★★★★☆
GCP ML APIs	★★★☆☆

OS / Virtualization:
Linux
Windows
Docker

Other tools:

ArcGIS Pro
Redis Cache
MS Project Server
Sharepoint 2013
SQL

Interests

Trail running, hiking.
Deep learning evangelism.

Experience

EY Global Delivery Services December 2021 – Present
(Manager – Data and Analytics)

- **Led the design and development of POCs/MVPs with generative AI models, directly impacting key areas such as:**
    - **Enterprise knowledge management and discovery**, enhancing information accessibility and improving decision-making.
    - **Optimizing contact center operations** through AI-driven insights, boosting customer service and operational efficiency.
    - **Application leveraging RAG, LLM Agents and tools:**
        - ESG benchmarking
        - Code documentation and translation
        - NL query for structured data.
        - Document comparison and disclosure validation.
        - Web search based cataloging tool.
        - Toolset explored: Azure OpenAI, Langchain, LangSmith, LlamaIndex, evaluate, peft, evaluate, vLLM, bitsandbytes.

- **As a Senior Data Scientist, orchestrated the technical strategy and implementation of a transactional fraud detection and mitigation application for a leading UK bank, involving:**
    - Engaging in the development process to counteract digital and card fraud, reinforcing asset security and customer trust.
    - Collaborating with stakeholders to align the solution with the bank's broader risk management protocols.

- **Directed the development and deployment of a Data Monetization platform for a major power and utility sector client, where I:**
    - Oversaw data handling and insights generation on a large scale, addressing the needs of millions of consumers.
    - Developed geo-spatial analysis (GIS) functionalities, widening the platform's applicability to various sectors and uncovering new business avenues.

- **Managed the development and implementation of a Document AI solution for a significant client in the Chemical (procurement) sector, including:**
    - Leading the project from conceptualization to deployment, ensuring the solution effectively streamlined procurement processes.
    - Drove model development, training data curation, and architecture design, significantly enhancing operational efficiency and reducing costs.

- **Contributed to business expansion efforts by:**
    - Initiating and executing multiple Natural Language Processing (NLP) and Computer Vision (CV) POCs for clients across different industries, showcasing the practical benefits of AI technologies.
    - Utilizing technical and project leadership skills to foster company growth and widen its client base with innovative AI solutions.

ESRI New Delhi R&D center (Environmental Systems Research Institute) May 2019 – November 2021 (Data Scientist 2):

- Played a pivotal role in the ArcGIS Python API team, integrating cutting-edge deep learning models for processing imagery, unstructured text, and 3D point cloud data.
- Served as Product owner for the Python API text module, leading agile practices and facilitating the seamless development and delivery of product enhancements.
- Drove the research and development of new datasets, spearheading the training of production-scale deep learning models on multi-GPUs. These models were primed for publication on the ArcGIS Living Atlas, showcasing a blend of technical acumen and strategic project direction.
- Assumed the role of NLP specialist, overseeing the curation and maintenance of the text sub-module within the Python API, ensuring the delivery of robust NLP capabilities.
- Identified and pursued opportunities for enhancing the existing product ecosystem with ML/DL technologies, demonstrating a strategic approach to product development and innovation.
- Led the deployment of ready-to-use models as web services on cloud infrastructure, facilitating the operationalization of deep learning models for broader accessibility and impact.

- Collaborated across teams to embed deep learning solutions within various products:
  - Few examples of DL inclusion:
    - Enhancing search and discoverability in ArcGIS Online.
    - Implementing solutions for the redaction of personally identifiable information from public documents, thereby elevating privacy and security measures.
- Championed the Python API and the team's innovations through presentations at Webinars, ESRI Developer Summits, and user conferences, effectively communicating the value and applications of our work to a wider audience.

Tata Consultancy Services (Life Sciences- TEG) Jan 2017– Mar 2019
(Data Scientist)

- Engaged with stakeholders to comprehensively understand their processes, laying the groundwork for targeted improvements.
- Analyzed the existing workflows to pinpoint opportunities for ML/NLP applications, aiming to enhance operational efficiency.
- Collaborated closely with fellow developers to extract and prepare the necessary data for analysis and modeling.
- Developed and enforced data labeling guidelines, overseeing the manual labeling efforts carried out by my team for training data preparation.
- Outlined the technical infrastructure needs, leading the setup of Virtual Machines (VMs) on the Google Cloud Platform to support our computing requirements.
- Architected and implemented a data cleansing and preprocessing pipeline, ensuring data quality and readiness for model training.
- Conducted thorough research on cutting-edge deep learning architectures and academic papers, adapting state-of-the-art solutions to meet our specific project needs.
- Took charge of model development, from initial building and training to fine-tuning and establishing deployment pipelines, ensuring models are ready for production use.
- Provided ongoing support to the team, troubleshooting and resolving challenges encountered during the model training process.
- Focused on team capability enhancement by hiring and mentoring new ML talents, fostering a skilled and knowledgeable workforce.

Tata Consultancy Services (Ameriprise Financial) Mar 2013 – Sep 2016 (Sharepoint developer/Project Server SME)

- Design, develop, and manage site content and capabilities and provide daily onsite maintenance of the existing SharePoint portals.
- Design intelligent form-based applications (InfoPath) as per business requirements.
- Work with Project Managers, providing accurate development estimates as requested.
- Ensure systems change management is carried out in accordance with agreed standards and procedures on Service Now.
- Walkthrough of the design and code to the Production support team and Change management team.
- Reporting of status to the client through weekly meetings.
- Act as Project Server SME for Project Management Group.
- Assist PMs with the maintenance of project pages in SharePoint.