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Top Skills

Artificial Intelligence (AI)
Data Engineering
Amazon Web Services (AWS)

Languages

Tamil (Native or Bilingual)
English (Professional Working)

Certifications

Data Science using Python

Dhamodharan Karuppuswamy

Senior AI/ML Engineer | Passionate About Transforming Data into Insights
Bengaluru, Karnataka, India

Summary

As a Senior ML Engineer with a robust background in Full Stack Development, I bring a versatile skill set to the realms of artificial intelligence and data engineering. My expertise encompasses AWS, Text Analysis, Retrieval-Augmented Generation (RAG), chatbot development, AI implementation, and comprehensive data engineering solutions.

What sets me apart is my ability to quickly adapt to new technologies, keeping me at the forefront of the ever-evolving tech landscape. This adaptability, combined with my full-stack experience, allows me to tackle machine learning projects holistically, ensuring seamless integration from backend algorithms to user-facing applications.

Key Areas of Expertise:

- Large Language Models (LLM's)
- Retrieval-Augmented Generation (RAG) Systems
- Natural Language Processing (NLP) & Text Analysis
- AWS Cloud Solutions
- Data Engineering
- Full Stack Development

Throughout my career, I have consistently delivered innovative solutions that leverage cutting-edge technologies to address complex business challenges. I thrive in environments that push the boundaries of what's possible in AI and Text Analytics.

As I advance in my role as a Senior ML Engineer, I aspire to become a Solution Architect, focusing on designing comprehensive, scalable architectures that harness the power of AI and cloud technologies to drive business transformation.

Experience

Merck Group
Senior Machine Learning Engineer
March 2022 - Present (3 years 2 months)
Bengaluru, Karnataka, India

As a Senior Machine Learning Engineer at Merck KGaA, I drive innovation in
AI and machine learning, focusing on Text Analytics, Large Language Models
(LLMs), and AWS solutions. I play a pivotal role in my team, leveraging my
expertise in AWS and Foundry technologies. With strong skills in Python and
a flexible mindset for new technologies, I support the Data Science team by
enhancing infrastructure and deployment processes. My role includes a variety
of tasks, supported by key achievements that demonstrate my commitment to
advancing our AI capabilities.

Key Areas of Expertise:

• Architecting scalable AWS infrastructure and solutions.
• Developing AI-powered solutions, including advanced OpenAI-based APIs.
• Driving end-to-end application development and deployment processes.
• Leveraging Large Language Models (LLMs) for innovative text analytics.
• Guiding backend development teams to enhance project outcomes.

Tools & Technologies:

• Python, IaC (CloudFormation), Azure Pipeline
• AWS Batch, Lambda, ECS, ECR, EC2, API Gateway, WAF, ALB, etc.,
• MLFlow, Azure OpenAI, Lang Chain, Lang Graph, Langfuse, Langdock,
Ragas, Truelens, etc.,
• FastAPI, Streamlit, Panel, etc.,
• Google BigQuery, SQL, Apache Solr, MongoDB, PostgreSQL, etc.,

UST
Senior Software Engineer Technical Lead
July 2019 - March 2022 (2 years 9 months)
Bengaluru, Karnataka, India

As a key consultant on the Data Analytics team at Merck KGaA, I specialize
in industrializing data feeds and developing robust data pipelines. My work
focuses on leveraging data analytics and advanced technologies to drive
business value and deliver innovative solutions. I lead the backend team and
support text analytics use cases.

Key Areas of Expertise:

• Managing end-to-end data collection, processing, and analysis to solve complex business challenges.
• Leading backend teams of data engineers and scientists to drive successful projects.
• Implementing custom text extraction solutions for biomedical entity recognition.
• Integrating external data sources and leveraging Google BigQuery for data analytics.
• Automating processes and developing API services using Python and FastAPI.

PPTS [India] Pvt Ltd
Senior Software Engineer
February 2019 - July 2019 (6 months)
India

As a Senior team member in the Data Management and Python Automation Team, I took the initiative to implement UI-based solutions that optimized data extraction and analysis in the Legal Domain.

Despite my short tenure, I set ambitious goals and made significant contributions by developing an innovative user-friendly platform that enhanced efficiency and streamlined processes, driving substantial improvements in our data management practices.

Key Areas of Expertise:

• Managed data extraction and analysis in the Legal Domain, providing critical insights.
• Developed a user-friendly UI-based platform and established API services, boosting production speed from 4 to 10 new domains per day.
• Implemented a data extraction framework and reusable Python libraries, significantly reducing development time.
• Led and trained team members while overseeing independent and collaborative projects.
• Designed text extraction methods for user-related information to enhance recommendation systems and ranking analysis.
• Automated various manual processes using Python for increased efficiency.

Ugam
Software Engineer
January 2016 - January 2019 (3 years 1 month)
India

As a member of the Infrastructure Development & Support team, I focused on data engineering by developing and managing data extraction for highly complex websites. My work involved building advanced platforms for effective data retrieval and supporting the Big Data team in delivering robust data solutions. I successfully implemented numerous data pipelines while adhering to strict SLAs, ensuring timely and efficient data processing.

Key Areas of Expertise:

• Developing and managing data extraction processes for complex websites.
• Building advanced platforms for effective data retrieval and supporting Big Data solutions.
• Implementing robust data pipelines while adhering to strict SLAs for timely processing.
• Collaborating with cross-functional teams to enhance data engineering capabilities.
• Utilizing data engineering tools and technologies to optimize data workflows.

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Education

Kumaraguru college of Technology
Bachelor of Engineering, Computer Science and Engineering · (April 2012 - April 2015)

PSG College of Technology
Diploma, Computer Science and Engineering · (2009 - 2012)

Mani Higher Secondary School, Coimbatore
School, SSLC · (2009)