RAJAT DUNGARWAL

Software Developer

+1 (682) 558-1036 dungarwalrajat@gmail.com LinkedIn Portfolio GitHub

EDUCATION

University of Texas at Arlington, TX, USA *August 2023 – May 2025*
Master of Science in Computer Science *GPA: 3.92/4.0*
Relevant Coursework: Machine Learning, Software Engineering, Distributed Systems, Data Mining, Cloud Computing & Big Data

TECHNICAL SKILLS

Languages:	Python, Java, C#, JavaScript
Backend & APIs:	ASP.NET Core, Flask, Django, REST, FastAPI, JSON, JWT, OAuth 2.0
AI / Data:	Machine Learning, TensorFlow, PyTorch, Pandas, NumPy, Data Mining, ETL, Model Evaluation, Power BI
Cloud & DevOps:	AWS, Docker, Kubernetes, CI/CD, Git/GitHub, Microservices
Databases:	MySQL, PostgreSQL, MongoDB, Snowflake, BigQuery

PROFESSIONAL EXPERIENCE

Data Analyst - *University of Texas at Arlington, TX, USA* *June 2025 – Present*

- Annotated and validated large-scale sugarcane root image datasets using CVAT, enabling supervised training of deep learning models for root segmentation research.
- Built standardized ETL pipelines (Pandas, NumPy) across 5 biomedical and agricultural datasets, reducing data inconsistencies by 18% and accelerating machine learning training cycles by 25%.

Software Engineer - *Accenture (Client - JPMorgan Chase), India* *August 2021 – July 2023*

- Promoted to Application Development Analyst within one year, recognized by management for high-impact contributions to enterprise software engineering initiatives.
- Engineered modular ASP.NET Core services and REST APIs backed by SQL Server, optimizing database queries and request handling to improve system throughput and performance by 25% handling thousands of daily transactions.
- Identified and resolved critical system bottlenecks in production environments, reducing application load times by 30% within 3 months through performance tuning, code refactoring, and algorithmic improvements.
- Deployed application monitoring and alerting using logging frameworks and Grafana dashboards, improving system observability and reducing production downtime by 40%.

Machine Learning Research Intern - *GRROOM, India* *April 2020 – May 2021*

- Developed machine learning pipelines for fashion image classification using Python, web scraping, data preprocessing and supervised training with TensorFlow and PyTorch.
- Designed and executed image annotation and labeling workflows for fashion datasets, improving data quality and reducing annotation errors by 20%, contributing to improved model classification accuracy.

EDUCATIONAL EXPERIENCE

Graduate Teaching Assistant - *University of Texas at Arlington, TX, USA* *August 2024 – May 2025*

- Mentored 50+ students in advanced algorithms, data structures and Python programming through weekly office hours & technical guidance.
- Created performance tracking dashboards using Power BI and Python-processed data to monitor accuracy trends and identify learning gaps, enabling data-driven instructional improvements.

Research Assistant - *University of Texas at Arlington, TX, USA* *August 2023 – July 2024*

- Co-ordinated faculty-led research projects by collecting, cleaning, and preprocessing structured and unstructured datasets using Python.
- Performed exploratory data analysis and basic machine learning experiments to support research findings and improve data quality.

PROJECTS

AI Analytics Copilot (Natural Language to SQL Insights Platform) View
Python, FastAPI, PostgreSQL, Streamlit, Ollama (Local LLM), SQL

- Developed an AI analytics platform that converts natural language queries into SQL using a local large language model, enabling faster, more accurate data analysis across structured datasets.

Monthly Retail Sales Dashboard (E-Commerce Business Intelligence) View
Power BI, Python, SQL, Excel, Pandas, NumPy, Matplotlib, Seaborn, Jupyter Notebook

- Built an analytics pipeline using Python, SQL, and Power BI to transform 10K+ transactional records into KPI-driven dashboards for monitoring trends and performance metrics.

Thing Translator (AI Product and Research Project) View
TensorFlow, Android, Java, NLP, TTS, Image Classification

- Engineered a real-time image classification pipeline using TensorFlow Lite, compressing model size by 45% and reducing average inference time to 0.8 seconds on Android devices.

Personal Finance Tracker (Financial Planning Application) View
Flask, MySQL, Git, Docker, REST APIs, OAuth 2.0, JWT

- Constructed a complete CI/CD pipeline with automated testing and deployment using Jenkins and Docker, enabling a 90% code coverage and 30% faster release of new features

CERTIFICATIONS

- **Google** - Machine Learning Operations (MLOps) for Generative AI
- **IBM** - Data Science
- **Authored & Published** - Thing Translator (Eliva Press; available on Amazon), contributing applied AI research in ML and NLP. View