

UTKARSH ADHRAN

DETAILS

ADDRESS

Noida
India

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EMAIL

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LINKS

[LinkedIn](#)

SKILLS

Python

Pandas

MySQL

DuckDb

QuestDB

Grafana

Linux

Django

Streamlit

PROFILE

Software developer with 6+ years of experience specializing in automation, data engineering, and system integration. Proven ability to handle large-scale financial market data pipelines, having worked with 1.5TB+ of raw options and futures data, converting and optimizing it for analysis using modern tools like DuckDB and Parquet. Experienced in building end-to-end solutions across Python and Django — from backend automation and scripting to live data visualization with QuestDB and Grafana. Hands-on experience with AWS including S3 integration and cloud database migration. Known for identifying bottlenecks and solving them through practical engineering, whether optimizing storage with compression techniques or streamlining workflows through automation. Comfortable working across cross-functional teams with a strong focus on delivering reliable, scalable, and maintainable solutions.

EMPLOYMENT HISTORY

Software Developer, Open Futures and
Commodities Private Limited

Noida

Jul 2025 — Present

Roles and Responsibilities :

- Worked with NSE market data, handling large-scale CSV files and implementing efficient data compression techniques using Zstd to optimize storage and access performance.
- Migrated and converted large CSV datasets into Parquet format using DuckDB with custom filters, significantly improving data query performance and storage efficiency.
- Implemented caching mechanisms using Joblib to optimize repeated computations and reduce processing time across data pipelines.
- Explored and evaluated multiple data processing tools including PyArrow and Dask for experimental and analytical purposes.
- Worked with TAIFEX Options & Futures raw data (1.5TB) and converted it into structured Parquet files using DuckDB for further quantitative analysis.
- Developed and implemented multiple quantitative trading strategies on large-scale options data using Python.
- Built Streamlit applications to enable interactive analysis and testing of custom strategies on large datasets.

Joblib



Shell Scripting



Git



AWS



LANGUAGES



English



Hindi



- Set up live data pipelines to Grafana via QuestDB for real-time data visualization and daily data representation using rsync.
- Established automated pipelines to fetch, process, and schedule daily raw market data across different expiries.

Notable Projects :

NSE Market Data Pipeline & Optimization:

- Worked on large-scale NSE market data handling involving massive CSV files. Designed and implemented an efficient data compression and storage pipeline using Zstd and Parquet format via DuckDB with custom filters. Integrated Joblib caching to optimize repeated computations, and explored PyArrow and Dask for data processing improvements.
- Technologies: Python, DuckDB, Joblib, PyArrow, Dask, Zstd, Parquet, Linux

TAIFEX Options & Futures Data Pipeline:

- Worked on end-to-end data pipeline for TAIFEX Options & Futures covering 1.5TB of raw .dat data. Converted raw data into structured Parquet format using DuckDB, and developed quantitative trading strategies on large-scale options data. Built interactive Streamlit applications for strategy analysis and testing.
- Technologies: Python, DuckDB, Streamlit, Parquet, Linux

Live Market Data Visualization & Automation

- Designed and set up a live data pipeline integrating QuestDB and Grafana for real-time market data visualization. Established automated pipelines using rsync to fetch, process, and schedule daily raw market data across different expiries.
- Technologies: Python, QuestDB, Grafana, rsync, Linux

Consultant, Genpact

Noida

Oct 2021 — Apr 2025

Roles and Responsibilities:

- Debugged and tested existing applications to enhance system performance and ensure error-free execution across various environments.
- Assisted internal teams by analyzing reported issues, replicating scenarios, and identifying root causes to implement stable fixes.
- Supported development teams by preparing test scenarios, regression checks, and environment setups for smoother application life-cycle management.
- Improved operational workflows by creating scripts that increased efficiency across repeated tasks and reduced manual overhead.

Notable Projects :

- **Credit Suisse – ML-Based Data Completion (POC):**
Built a Proof of Concept to evaluate the use of machine learning algorithms for auto-filling incomplete datasets. Integrated rule-based logic to test multiple scenarios, helping assess feasibility and effectiveness in reducing manual processing.
- **PIMCO – Red Hat System Migration:**
Contributed to the migration effort from Red Hat Enterprise Linux 5 to 8 by creating utility scripts, resolving package dependencies, and debugging application issues, ensuring a seamless and stable migration.

Software Developer, FreshoKartz Agri
Products Pvt. Ltd.

Jaipur

Jan 2021 — Oct 2021

Roles and Responsibilities :

- Maintained and enhanced the company's CRM platform, resolving critical bugs and integrating new features to improve system usability and overall performance.
- Developed mobile and web applications to streamline internal processes like employee tracking and sales operations, significantly boosting operational efficiency.
- Worked with the mobile development team using React Native to deliver employee-facing and farmer-facing applications for cross-platform use.
- Contributed to the migration of the company's database from Google Cloud Platform (GCP) to AWS, improving system scalability, reliability, and performance.

Notable Projects :

- **FreshoKartz CRM System**
Led maintenance and feature development for a CRM system covering sales, inventory, vendor purchases, and kiosk operations. Oversaw deployment cycles, resolved system conflicts, and ensured stable day-to-day CRM performance.
Technologies used: Django, MySQL, Python
- **FreshoKartz Employees Application**
Built a mobile app using React Native for employee management, including features for attendance tracking, daily updates, and center-wise inventory control. This enhanced visibility and efficiency across field operations.
- **FreshoKartz Farmer Application**
Developed a farmer-oriented application connecting users to an online platform for ordering agricultural products and accessing services. Promoted better farming practices and improved product reach and quality through digital enablement.

Python Developer, SequelString Solutions
And Consultancy Pvt Ltd

Noida

Dec 2019 — Oct 2020

Roles and Responsibilities:

- Developed **custom automation solutions** for data extraction, reconciliation, and transformation using Python, Pandas, Selenium, SQL, and PyPDF.
- Streamlined manual workflows by building automated pipelines and bots, improving processing speed and reducing errors.
- Managed data handling across multiple domains by implementing OCR, PDF parsing, and API integration.
- Worked on production-level scripts involving SQL-based logging, scheduled executions, and email-based status notifications.

Technologies Used:

Python, Pandas, Selenium, SQL (MySQL/PostgreSQL), PyPDF, OCR (Tesseract/OCR engines), APIs, Email Automation (smtplib/SMTP)

Notable Projects:

- **Invoice Billing – Hero MotoCorp Ltd**

Automated invoice parsing from structured PDF files using Python, Selenium, Pandas, and MySQL. Implemented an email alert system for process completion and error reporting.

Technologies: Python, Selenium, Pandas, MySQL, Email Automation

- **Electricity Bill Automation – Indus Towers**

Designed a script to extract fields from both digital and scanned PDF bills using PyPDF2, OCR, and Pandas. The output was structured and sent to an external API for client-side processing.

Technologies: Python, PyPDF2, OCR, Pandas, API Integration, SQL

- **Sales Order Automation – Aknamed**

Created an RPA bot to extract PO data from PDFs and auto-generate sales orders in the Aknamed portal via Selenium-driven browser automation.

Technologies: Python, Selenium, Pandas, PDF Parsing, SQL

- **ITSM Workflow Automation – KPMG International**

Developed scripts to automate ticket life-cycle operations including creation, assignment, and closure. Used Python and Selenium for automation, with SQL logging and Pandas for reporting.

Technologies: Python, Selenium, SQL, Pandas

- **Tender Data Extraction – IndiaMART**

Automated scraping of tenders from the IndiaMART portal and parsing related PDFs for metadata extraction using Pandas and Selenium.

Technologies: Python, Selenium, Pandas, PDF Extraction

EDUCATION

B.Tech, Lovely Professional University Jalandhar
Aug 2012 — Jul 2016

Senior Secondary School, Aliganj Montessori School Lucknow

High School, City Montessori School Lucknow

CERTIFICATION

AWS Certified Cloud Practitioner
Aug 2023 — Aug 2026

Foundational level AWS Certified Cloud Practitioner

Validation Number : [Q8WJVL7CWJ41Q5G8](#)