

# AEDUMBAKA KARTHIK

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## Career Objective

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Enthusiastic Software Developer with over 2+ years of experience in Python automation and data management. I specialize in automating records scraping and validation, reaching a reduction in manual efforts by using as much as 80%. Now looking to transition right into a Data Scientist function to utilize my abilities in data processing and analytics, with a focal point on superior system learning and statistics-driven choice-making.

## Technical Skills

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- **Languages:** Python, SQL, Solidity
- **Libraries & Frameworks:** Pandas, NumPy, scikit-learn, TensorFlow, Keras, Matplotlib, Seaborn, Plotly
- **AI & NLP Tools:** Hugging Face Transformers, LangChain, Generative AI (GenAI)

## Experience

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**Software Engineer – Cognizant**

*Feb 2022 – Present*

**Talend TMC External Automation using Python:**

- **Secured Job Execution and Risk Elimination**
  - Automated Talend job execution via TMC APIs, removing 100% of manual TMC access and reducing cluster risks by 90%.
  - Enabled dynamic parameter injection (task ID, table lists, para files) directly through Python without TMC UI access.
- **Logging, Job Chaining, and Promotion Workflow**
  - Implemented Excel log generation with job run ID, status, and logs; enabled smart job chaining based on completion.
  - Designed environment-wise promotion flow (Dev → Pre-Prod → Prod), cutting manual transition time by 95%.

**Technologies & Tools:** Python, Talend TMC REST API, Excel (openpyxl, pandas), Shell Scripting

**Automation Projects – Internal Tools Development:**

- **Data Validation & Reporting**
  - Automated daily validation of 100,000+ records, cutting manual effort by 90%.
  - Created and deployed 10+ reusable scripts, improving efficiency and compliance.
- **Data Scraping & Database Comparison**
  - Automated comparison of 50,000+ records/month, improving accuracy by 95%.
  - Built an alert system to send automated emails for missing data, reducing follow-ups by 80%.
  - Optimized workflows, reducing data processing time by 1 month per quarter and manual work by 75%.

**Technologies & Tools:** Python, SQL, Email Automation, Database Scripting

## Achievements

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**Top 5 Finalist – Cognizant Blue Bolt Innovation Challenge**

*Feb 2025*

- Designed and developed a Generative AI-powered SQL Optimization System for structured and unstructured datasets.
- Improved query performance by auto-rewriting complex SQL based on data characteristics and patterns.

## Education

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**B.Tech – Electronics and Communication Engineering**

*2018 – 2022*

*Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, India*

CGPA: 7.5 / 10