

Akshay Ravi

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Education

University of Washington, Seattle, USA
Master of Science in Data Science

September 2024 - March 2026
GPA: 3.90

Narsee Monjee Institute of Management Studies, Mumbai, India
Bachelor of Technology in Data Science

July 2020 - May 2024
GPA: 3.71

Skills

Languages: Python, SQL, R

Frameworks & Libraries: Pandas, Polars, NumPy, Scikit-learn, TensorFlow, OpenCV, NLTK

Data Visualization: PowerBI, Tableau, Matplotlib, Seaborn, Plotly

Platforms & Tools: Git, Docker, MySQL, MongoDB, Jupyter Notebook, AWS

Experience

Data Science & Analytics Intern, ASML – Hillsboro, OR, USA (on-site)

June 2025 – September 2025

- Engineered a scalable data pipeline to securely fetch and parse over 2,000 unstructured data files daily using asynchronous Python, successfully achieving a 5x speed increase for product analytics workflows.
- Developed an automated product usage tracker and comprehensive Power BI dashboard to monitor customer adoption, effectively saving 80 hours of development time and eliminating 20 hours of manual weekly reporting.

Data Science Intern, AkzoNobel – Amsterdam, Netherlands (remote)

June 2023 – June 2024

- Designed and implemented a physics-based neural network optimizer using SciPy and TensorFlow Lite, successfully reducing complex color recipe processing time from 100 seconds to 0.1 seconds for real-time applications.
- Developed novel neural network architectures leveraging high-dimensional spectrophotometric data for toner prediction, resulting in a 2x improvement in model inference speed over previous baselines.
- Experimented with image processing models to extrapolate information from microscopic images for toner prediction, creating custom image generators for data augmentation and improving model accuracy by 22%.

Data Science Intern, Lumiq AI – Noida, India (remote)

June 2022 – July 2022

- Executed data gathering and preprocessing workflows for the classification of ID proofs and medical forms, effectively structuring unstructured datasets to support the development and training of Optical Character Recognition (OCR) models.

Data Science Intern, Acxiom Technologies – Mumbai, India (remote)

May 2021 – June 2021

- Applied statistical modeling techniques, including K-Nearest Neighbors and Linear Regression via Scikit-Learn, to analyze diverse enterprise datasets, successfully optimizing data processing efficiency and deriving actionable business insights.

Projects

Sequel2SQL | *Generative AI & Database Systems - Python, RAG, PostgreSQL*

October 2025

- Architected a SQL query repair agent utilizing RAG with ChromaDB to automatically resolve complex query errors and continuously updation of the knowledge base for improved future accuracy.

Quizzatron | *Generative AI - Python, Ollama, Flask*

February 2025

- Developed a Generative AI application to create dynamic quizzes from a given topic or PDF using Gemini and Deepseek Large Language Models, featuring a robust Flask API for seamless, on-demand integration.

Car Brand Recommender | *Natural Language Processing - Python, BERT, Streamlit*

March 2023

- Built a comprehensive recommender system using a Support Vector Machine classifier and sentiment analysis of thousands of car reviews to accurately suggest brands matching specific user-defined preferences.

Fire Detection | *Computer Vision - Python, YOLO*

February 2023

- Curated a custom dataset of 1,300 annotated images to train a YOLOv4-tiny model for real-time fire detection, achieving a validated 36% mAP@0.50 on video files and live camera feeds.

Football Goal Detection | *Computer Vision - Python, TensorFlow*

November 2022

- Designed and evaluated multiple CNN architectures on a custom-labeled dataset, utilizing Grad-CAM visualization techniques to interpret model features for automated football goal-line event detection.