

# Allan Cheerakunnil Alex

Mumbai, India | +91 9930703439 | [Email](#) | [LinkedIn](#) | [GitHub](#) | [Portfolio](#) | [Blog](#)

## Professional Summary

Results-driven Data Scientist with a Master's in Computer Science (Specialization: Data Science), leveraging a strong foundation in Python, SQL, and machine learning to transform complex data into actionable insights. Proficient in the end-to-end data science lifecycle, from predictive modeling and statistical analysis to creating impactful BI dashboards in Tableau and Power BI. Eager to apply disciplined problem-solving abilities to drive business value.

## Technical Skills

### Languages

Python, SQL

### Databases

PostgreSQL, MySQL, SQL Server

### Core Methodologies

Predictive Modeling, Statistical Analysis, NLP, Machine Learning, EDA, Data Mining

### Deployment (CI/CD)

Vercel

### Libraries & Frameworks

Pandas, NumPy, Scikit-Learn, Matplotlib, SciPy

### BI & Visualization

Tableau, Power BI, MS Excel

### Web Technologies

Astro.js, Tailwind CSS, JavaScript, HTML/CSS

### Developer Tools

Git, GitHub, VS Code, Jupyter Notebook, Google Colab, Node.js, npm, conda

## Projects

### Retail Sales & Revenue Optimization

*Technologies: Python (Pandas, Matplotlib), SQL, EDA*

- Conducted EDA on a transactional dataset to validate the 80/20 principle, identify top revenue drivers, and map peak sales seasons to optimize inventory and marketing strategy.

### Customer Segmentation with K-Means & RFM

*Technologies: Python (Scikit-learn), K-Means Clustering, RFM Modeling*

- Developed an RFM model and used K-Means clustering (optimized with Log Transformation) to profile 4,300+ customers into 5 distinct segments for tailored marketing.

### Kindle Book Recommendation System

*Technologies: Python (Surprise), SVD, Collaborative Filtering*

- Built a Matrix Factorization model using SVD to solve data sparsity, achieving a low RMSE of 3.49 to generate highly personalized book recommendations.

## Kaggle Competitions

### Digit Recognizer - Handwritten Digit Classification

Designed and trained a Convolutional Neural Network (CNN) with Keras to classify handwritten digits, achieving **98.92% accuracy** on the Kaggle test set (Tech: Python, TensorFlow, Scikit-learn).

## Publications / Articles

### The Latent Factors: Building a High-Accuracy Recommendation Engine with SVD

Authored a technical deep-dive explaining the role of latent factors and the strategic choice of SVD for sparse data, published on my blog.