Ayushi Mandlik

Data scientist

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PROFESSIONAL SUMMARY:

Resourceful Data Scientist with experience delivering machine learning solutions across industry and research domains. Skilled in Python, SQL, GCP, and end-to-end ML model development, including customer segmentation, risk modeling, A/B testing, and funnel analytics. Adept at optimizing data workflows and building production-ready pipelines with a focus on real-time inference and statistical rigor. Proven leadership as Team Lead of a winning ML hackathon team and as coordinator of machine learning journal clubs, driving collaboration and technical discussion across diverse groups.

EXPERIENCE:

CRM Workflow Automation & Customer Insights

Data Analyst / Project Lead – **Truetel**, Melbourne | Apr 2024 – Mar 2025

Software & Tools: Zoho CRM, Python, Excel, SQL, Google Sheets

- Designed and implemented workflows to organize and migrate customer data into Zoho CRM, ensuring data accuracy and system efficiency.
- Automated lead management process, including email notifications and follow-up schedules, enhancing operational efficiency.
- Collaborated with cross-functional teams to optimize data processes, contributing to improved customer engagement strategies.

Role alignment highlights: Mid-level experience in a Data Scientist role, Strong customer lens and affinity, Customer Segmentation, Funnel Analytics, Ability to effectively communicate to all stakeholders (technical and non-technical).

Forecast Optimization for Parcel Logistics

Data Science Intern – **Australia Post**, Melbourne | Apr 2024 – Dec 2024

Software & Tools: Python, Dataiku DSS, GCP (BigQuery), Tableau, Excel, SQL, Git

- Implemented hierarchical forecast reconciliation, improving parcel volume forecast accuracy (MAPE improved by 1%).
- Streamlined and automated pipelines within Dataiku DSS for robust forecasting workflows.
- Created dashboards in Tableau and presented results, using A/B-style analysis to assess reconciliation strategies.

Role alignment highlights: Experience in Statistical Analysis, A/B Testing, Building ML Models in Python, Strong communication and presentation skills.

Real-Time CNN Pipeline for Radio Astronomy

Research Project – **Centre for Astrophysics and Supercomputing**, Melbourne | Oct 2019 – Jan 2024

Software & Tools: Python, TensorFlow, Keras, NumPy, SciPy, Matplotlib, Git, Slurm, OzStar HPC

- Developed a real-time CNN-based classification pipeline for astronomical signal detection, achieving 99.99% precision and 96.5% recall.
- Applied clustering techniques (DBSCAN) to group candidate events based on signal features, improving noise filtration and classifier efficiency.
- Conducted regression modeling to optimize telescope sensitivity across temperature and time.

Role alignment highlights: Solid understanding of Statistical methods and Machine Learning techniques, Customer Segmentation, Risk Modeling, Understanding of MLOps practices.

Statistical Modeling & Bayesian Inference for Pulse Fitting
Research Project – **Centre for Astrophysics and Supercomputing**, Melbourne | Oct 2019 – Jan 2024

Software & Tools: Python, NumPy, SciPy, Pandas, Matplotlib, Jupyter

- Performed probabilistic modeling using Bayesian inference for parameter estimation and event classification.
- Evaluated models using AIC, chi-square, and likelihood-based criteria to support data-driven model selection.

Role alignment highlights: Risk Modeling, Statistical Analysis, Building ML Models in Python

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Large-scale Signal Processing for Galaxy Imaging
Masters Researcher – **Max Planck Institute for Radio Astronomy**, Bonn, Germany | Oct 2017 – Jan 2018

Software & Tools: Python, JURECA HPC, NumPy, Astropy, Matplotlib, Git

- Processed ~100 TB of radio astronomy data using signal processing pipelines and 3D visualization techniques.
- Applied convolutional models to map magnetic fields and Faraday rotation features.

Role alignment highlights: Experience in Statistical Analysis, Model Building in Python

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Data Visualization of Star-Forming Regions
Research assistant – **Max Planck Institute for Radio Astronomy**, Bonn, Germany | Mar 2017 – Oct 2017

Software & Tools: Python, NumPy, Astropy, Matplotlib

- Built 3D visualizations to analyze galactic star-forming regions and identify distance-related patterns.
- Integrated multi-source datasets to support spatial analysis and improve interpretability of key variables.

Role alignment highlights: Statistical Analysis, Strong communication and presentation skills

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TECHNICAL SKILLS:

- **Languages & Libraries**: Python (NumPy, Pandas, Scikit-learn, TensorFlow, Keras), SQL
- **Machine Learning & Analysis**: Clustering (DBSCAN, K-Means), Customer Segmentation, Statistical Modeling, A/B Testing, Forecasting, Model Evaluation
- **Platforms & Tools**: Dataiku DSS, GCP (BigQuery), AWS (Foundational), Git, Tableau, Zoho CRM, Jupyter, Slurm, HPC (OzStar, JURECA)
- **Data Engineering & MLOps**: ETL Workflows, Workflow Automation, Data Reconciliation Pipelines
- **Visualization**: Tableau, Matplotlib, Seaborn, Dashboards
- **Soft Skills**: Cross-functional Collaboration, Agile Workflow, Technical Communication, Stakeholder Engagement

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EDUCATION:

Ph.D. in Astrophysics (*2019-2024)*
Swinburne University of Technology, Australia
Master of Science in Astrophysics (*2015-2017)*
University of Bonn, Germany
Bachelor of Science in Physics, Math and Electronics (*2012-2015)*
Christ University, India