



ML Engineer | AI Engineer | Data Scientist ,B.Tech(Computer Science & Engineering), MA (Artificial Intelligence) RMIT
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CAREER PROFILE

Machine Learning Engineer with experience in computer vision, deep learning, and end-to-end ML pipelines, supported by a Master of Artificial Intelligence from RMIT University. Skilled in YOLO-based detection/segmentation/classification, Highlighter SDK workflows, and cloud deployment on AWS/GCP. Strong ability to turn data into actionable insights and deliver measurable improvements through scalable, production-ready AI solutions.

TECHNOLOGIES

- **Languages & Scripting:** Python, Java, Kotlin, C#, SQL, R, Shell Scripting
- **ML & AI:** YOLOv8 (Detection, Segmentation, Classification), Highlighter SDK & Platform, TensorFlow, Keras, Scikit-learn, Hugging Face Transformers, NLTK, Pandas, NumPy
- **Computer Vision:** ONNX Runtime, OpenCV, Mask-to-Polygon Analysis, Image Augmentation
- **Data Analytics:** SQL, Tableau, Power BI, Excel Dashboards, EDA, Statistical Analysis, Pandas, NumPy
- **Backend & APIs:** FastAPI, RESTful APIs, Flask (basic), Node.js (basic)
- **Databases:** MySQL, PostgreSQL
- **Cloud & DevOps:** AWS (EC2, S3, SageMaker), GCP, Docker, CI/CD, Kubernetes (Basic), Terraform (Basic)
- **Project Management:** JIRA, Trello, MS Planner, Slack
- **Tools & Platforms:** Git, Jupyter Notebook, Android Studio, Firebase, ROS (Robot Operating System)

EXPERIENCE

ML Engineer Nov 2025- Present
Silverpond, Melbourne, Victoria, Australia

- Designed, trained, and optimised YOLO-based detection, segmentation, and classification models within the Highlighter ML platform, improving performance through systematic hyperparameter tuning, augmentation strategies, and architecture-level refinements.
- Built end-to-end ML workflows including dataset curation (4k+ images), preprocessing, model training, ONNX export, and inference testing using the Highlighter SDK, achieving consistent improvements in validation metrics across multiple model iterations.
- Diagnosed and resolved complex model and inference issues such as mask-to-polygon failures, agent definition errors, and output-format mismatches by analysing logs, comparing local vs Highlighter outputs, and validating geometric predictions.
- Collaborated with senior ML engineers to refine model behaviour, assess model outputs, and document results through technical summaries, error analyses, and performance reports to support deployment decisions.

ML Engineer Jan 2024–Mar 2025
BeDelighted, Melbourne, Victoria, Australia

- Worked directly with the Founder and **CEO** to gather requirements, define KPIs, and deliver production-ready AI and data science solutions aligned with business goals.
- Developed and deployed recommendation systems using collaborative and content-based filtering, increasing user engagement by **15%**, and boosting conversion rates by 10%.
- Built predictive models with decision trees and gradient boosting to identify high-value customer segments, driving a **12%** increase in targeted campaign effectiveness.
- Performed advanced EDA and created business intelligence dashboards, providing actionable insights that improved customer retention by 8%.
- Designed and automated ETL pipelines, implemented MLOps workflows with CI/CD and Docker for scalable ML model deployment, and integrated model monitoring.
- Utilised NLP techniques (NLTK, spaCy) to analyse over 10,000 customer reviews, improving customer satisfaction scores by 20%.

- Led a team of 4 to design and build a machine learning-based recommendation system that delivered personalised skincare product suggestions based on user profiles and preferences.
- Implemented collaborative and content-based filtering algorithms using Python, TensorFlow, and Scikit-learn to ensure accurate product recommendations.
- Conducted data collection, cleaning, and feature engineering, improving model accuracy and ensuring scalable deployment.
- Collaborated with stakeholders to define project scope, allocate tasks, and present iterative updates, demonstrating strong leadership and technical execution.
- Delivered a fully functional ML solution that improved user engagement and showcased end-to-end model development, from data preprocessing to deployment.

- Designed and implemented an AI-driven autonomous navigation system using ROSbot 2.0, integrating computer vision and path planning algorithms to traverse and map dynamic environments.
- Developed real-time SLAM capabilities achieving >95% positional accuracy and applied A* and Dijkstra’s algorithms for shortest-path computation.
- Integrated sensor fusion (camera + LIDAR) for robust obstacle detection, leveraging OpenCV and image processing to achieve >90% mapping precision.

- Built a text summarisation pipeline using TF-IDF and Bag-of-Words to extract key insights from long-form content.
- Developed an RNN-LSTM sentiment classifier achieving 90% accuracy in summary relevance and 85% sentiment classification accuracy.
- Optimised preprocessing workflows using Pandas and NumPy for large-scale text datasets and leveraged Hugging Face Transformers for efficient real-time processing.

ADDITIONAL EXPERIENCE

- Analyse sales and operational data to forecast demand, optimize rosters, and reduce labour costs.
- Built and maintained KPI dashboards to track performance and guide operational decisions.
- Supported and maintained POS systems, back-office software, and in-store technology (MMX, RAMP, Whoppernet), troubleshooting issues to ensure continuity.
- Collaborated with management to implement data-driven process improvements, improving efficiency and customer retention.

EDUCATION

CERTIFICATIONS

REFERENCES

Available upon request.