

# HARRISON OGDEN-CARR

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<https://github.com/HarrisonOC-Creator> | Hawthorn East, VIC

## Professional Profile

AWS Certified Machine Learning Engineer Associate and Physics graduate seeking a fulfilling, rigorous career in machine learning and data analysis that enables me to solve complex problems, deliver lasting value, and continue developing my expertise. Strong foundation in Python, statistical modelling, and quantitative problem-solving, with hands-on experience across the AWS ML ecosystem. Skilled in designing reproducible ML workflows from local experimentation through to cloud deployment on AWS SageMaker.

## Key Skills and Attributes

- **Machine Learning & Cloud** - Experienced across the ML lifecycle, particularly within AWS SageMaker. Competent in data preparation, model training and hosting, and performance monitoring
- **AWS Services** - Broad Experience with AWS services and integrating them together: Storage: S3, Streaming: Kinesis, Permissions: IAM, Querying: Athena, Generative AI: Bedrock, ETL: Glue
- **Programming & Tools** - Strong background in Python and its library extensions (NumPy, pandas, SciPy, matplotlib). Applied Python, MATLAB, and Excel frameworks for simulations, engineering solutions, and data analysis. Familiar with Git, Jupyter Notebooks, and introductory PyTorch.
- **Analytical & Research** - Skilled in mathematical and physics simulations, stochastic modelling, and quantitative analysis.
- **Professional Attributes**- Strong communication, documentation, teamwork, and cross-disciplinary collaboration.

## Certifications

- AWS Certified Machine Learning Engineer – Associate (2025)

## Professional Experience

### Rosebank Engineering – Trades Assistant (Aircraft MRO)

Bayswater, VIC | Sep 2023 – Present

- Collaborated with engineers on design, prototyping, and overhaul of aerospace systems in a safety-critical environment.
- Maintained compliance workflows through ERP systems, ensuring reproducibility and audit readiness.
- Supported tooling development and data traceability, reinforcing precision and reliability.

## **Healthways Recreation Centre – Swim School Coordinator & Trainer**

Ringwood, VIC | Jul 2018 – Sep 2023

- Mentored and trained 20+ new staff.
- Managed data reporting, timetabling, and statistical tracking for 3,000+ students.
- Scheduled, planned, and administered new programs.
- Delivered training and cross-team updates; contributed to management meetings and championed operational improvements.

## **Projects & Research Experience**

### **AWS ML Certification Projects**

- Built and deployed SageMaker pipelines focusing on efficiency and repeatability.
- Implemented real-time and batch inference endpoints.
- Applied hyperparameter tuning, model monitoring, and bias detection (Clarify) to improve model robustness.
- Integrated AWS services (Glue, Athena, Kinesis, Step Functions, EventBridge) for end-to-end ML workflows.

### **University of Melbourne – Physics Research Labs**

Parkville, VIC | 2020 – 2022

- Developed numerical models of light-matter interactions, wave propagation, stellar classification, sandpile toppling, and semiconductor behaviour
- Automated data processing workflows and performed statistical analysis using Python, MATLAB, and Excel.
- Managed reproducible code with Git and presented results to academic and cross-functional audiences.
- Conducted advanced simulations, including Monte Carlo methods.

## **Education**

Bachelor of Science (Physics)

The University of Melbourne, Parkville VIC — Graduated: 2022

- First Class Honours in Laboratory & Computational Physics
- Extensive quantitative analysis across diverse physics concepts
- Heavy use of Python (NumPy, pandas, SciPy) for computational work
- Coursework in advanced mathematics, providing a strong analytical foundation