HARRISON OGDEN-CARR

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Professional Profile

AWS Certified Machine Learning Engineer Associate and Physics graduate with strong foundations in advanced mathematics, statistics, and scientific computing. Skilled in building and deploying machine learning models, managing data pipelines, and scaling solutions from local experimentation to cloud production. Experienced in Python, PyTorch, AWS, and Django web development, with a proven ability to design reproducible workflows, communicate results clearly, and deliver polished projects. Recent accomplishments include developing convolutional neural networks, applying transfer learning for image classification, modularising ML pipelines, and integrating interactive demos into a personal portfolio website for real-world user engagement.

Certifications

• AWS Certified Machine Learning Engineer – Associate (2025)

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) and Excel for computational work
• Coursework in advanced mathematics, providing a strong analytical foundation

PROFESSIONAL EXPERIENCE

Rosebank Engineering – Trades Assistant (Aircraft MRO)
Bayswater, VIC | Sep 2023 – Present
• Maintained compliance workflows and reproducibility through ERP systems.
• Supported tooling development and data traceability.

Healthways Recreation Centre – Swim School Coordinator & Trainer
Ringwood, VIC | Jul 2018 – Sep 2023
• Mentored and trained 20+ new staff and provided cross team updates.
• Managed data reporting, data organisation, timetabling, and statistical tracking for business.
• Scheduled, planned, and administered new programs.

Technical Skills

- **Mathematics & Statistics:** Calculus, Linear Algebra, Real Analysis, Probability, Statistics, Stochastic Modelling
- **Machine Learning:** Regression (Linear & Logistic), Decision Trees, k-Means, XGBoost, CNNs, Transfer Learning, Semantic Search, Feature Engineering, Model Training, Tuning & Evaluation, Deployment & Scaling
- **Scientific Computing:** Python (NumPy, pandas, SciPy, PyTorch, scikit-learn, seaborn, matplotlib), MATLAB, Jupyter Lab, Anaconda
- **Cloud & Deployment:** AWS SageMaker, Glue (ETL), S3, Athena, EC2, Bedrock (Generative AI), Step Functions, EventBridge
- **Data Management:** Data Manipulation, Workflow Automation, Reproducible Pipelines, GitHub Projects
- **Web Development:** HTML, CSS, Django, Hosting & Deployment, Responsive Design.

Professional & Personal Skills

- **Communication & Presentation**: Skilled at explaining technical concepts clearly, tailoring detail for both technical and non-technical audiences
- **Leadership Potential**: Confident in guiding projects, setting direction, and supporting peers in collaborative environments
- **Teamwork & Collaboration**: Thrives in cross-functional settings, building trust and contributing to shared goals
- **Analytical Mindset**: Naturally curious, methodical, and resilient in approaching complex problems
- **Adaptability & Continuous Learning**: Quick to absorb new tools and frameworks; proactive in expanding expertise across ML, cloud, and web development
- **Creativity & Design Thinking**: Balances technical precision with design sensibility to deliver polished, user-focused solutions
- **Resilience & Problem-Solving**: Calm under pressure, persistent in troubleshooting, and committed to iterative improvement
- **Professionalism & Integrity**: Reliable, organised, and attentive to detail, with a strong sense of accountability