Your Name

Applied Machine Learning Scientist [Email] | [Phone] | [LinkedIn/GitHub/Portfolio] | [City, Country]

Summary

A highly motivated and results-oriented scientist with a Ph.D. and over 7 years of experience in developing and applying computational models to solve complex, real-world problems. Proven expertise in building end-to-end machine learning systems, from large-scale data processing on HPC/cloud infrastructure to developing and deploying deep learning models. Seeking a role as an Applied ML Scientist to leverage skills in Python, PyTorch, and MLOps to create high-impact, data-driven solutions.

Core Competencies & Technical Skills

- **Languages:** Python (Expert), C++, SQL
- **Machine Learning:** Deep Learning (PyTorch), Scikit-learn (Random Forest), Time-Series Forecasting, Statistical Modeling, Optimization
- **MLOps & Data Engineering:** CI/CD, Kubernetes, Docker, Azure, High-Performance Computing (HPC), NetCDF
- **Backend & Web:** FastAPI, Next.js, React, Vercel

Professional Experience

Geospatial Data Scientist | CSIRO | Melbourne, Australia | 2023 - Present * Led the development of a state-of-the-art **PyTorch-based LSTM** model for hydrological forecasting at a continental scale, mirroring architectures from Google Research. * Designed and built a complex, end-to-end data pipeline in **Python** to automate over 97,000 unique simulation scenarios across **HPC and Azure**, supporting a high-impact climate adaptation study published in *Nature Sustainability*. * Implemented **MLOps** infrastructure, including a **Kubernetes cron job** for automated data acquisition and a PoC for LLM-based analysis using **LangChain**. * Developed a production-ready, tested, and CI/CD-integrated Python module for reservoir simulation for a government partner.

Geospatial Scientist | Bureau of Meteorology (BoM) | Melbourne, Australia | 2019 - 2023 * Served as the lead scientific developer for the upgrade of Australia's national hydrological model (AWRA-L v7). * Integrated **Machine Learning (Random Forest)** models with hydrological data to create novel, high-value applications, including mapping infrastructure risks and generating national fire danger rating inputs.

Education & Research

Ph.D., Civil Engineering (Hydrology) | Monash University | Melbourne, Australia | 2015 - 2019 * Thesis focused on advanced computational techniques for water resource management. * Developed and applied **metaheuristic optimization algorithms** and **advanced statistical methods** for data assimilation, building a strong theoretical foundation directly applicable to modern machine learning.

Personal Development & Projects

- **Full-Stack Development:** Built and deployed full-stack web applications using **FastAPI** (backend) and **React/Next.js** (frontend) on Vercel.
- **Algorithmic Foundations:** Completed MIT's "Introduction to Algorithms" course and maintain a consistent practice on LeetCode.
- **Low-Level Code Contribution:** Demonstrated ability to work in complex, established codebases by navigating and contributing to a large **C++** hydrological model.