Rory Hartong-Redden

November 6, 2024 | Boulder, CO | roryhr@gmail.com | linkedin.com/in/rory-hartong-redden | roryhr.com

Summary

Machine Learning Engineer with 7+ years in data science, ML engineering, and data engineering, specializing in end-to-end product lifecycle management, deployment, and optimization. Strong background in designing ML algorithms, collaborating across product, engineering, and business teams, and ensuring high standards for model performance and resiliency. Core skills: Python, ML, statistical analysis, and CI/CD.

Skills

Programming Languages: Python, SQL, R, Shell DevOps: AWS, Docker, CI/CD, Git, GitHub
Data Processing: Postgres, Spark, Hadoop, S3, Airflow
Python Tools: pandas, scikit-learn, Flask, TensorFlow, Keras, PySpark, Matplotlib, Jupyter

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Professional Experience

- **Fast Radius (SyBridge)** — Boulder, CO
  Technical Manager and Senior Data Scientist — *Aug 2021–May 2024*
  - Led a 3-person data science team, partnering with product and engineering teams to develop and deploy key software products featured in our IPO documents
  - Ensured API uptime of our revenue-critical service, facilitating $10M in monthly instant quotes
  - Crafted SQL queries to collect data, monitor model accuracy, and answer business questions
  - Trained and deployed a random forest regression model of CNC cycle time for CNC instant quoting, providing the majority of the revenue of our site
  - Provided statistical analysis and visualization analysis for R&D projects with manufacturing IoT time series data
  - Aligned with cross-functional teams on pricing models and setup a lightweight configuration database using the Microsoft Graph API

- **Fast Radius** — Chicago, IL
  Data Scientist — *Feb 2020–Aug 2021*
  - Tech stack: Python, Flask, Docker, AWS ECS, Datadog, Metabase, GitHub
  - Founding data scientist: developed, deployed, and maintained the first cost-prediction regression models, contributing to the early growth of the platform
  - Predicted shipping costs using mixed integer programming to pack boxes as input for the UPS API
  - Contributed to the "Manufacturing and Development Platform" patent, laying the groundwork for the company's software architecture
  - I dipped into the Phoenix Elixir backend, JavaScript frontend, and Terraform infrastructure as needed to fix bugs and remove blockers

- **runtastic** — Linz, Austria
  Data Engineer — *Oct 2018–Sep 2019*
  - Tech stack: Python, SQL, Spark, Hadoop, Flume, Oozie, Hive, Kafka, GitHub
  - Led the design and deployment of a "People You Might Know" feature using Spark's GraphX extension in order to bootstrap a social network to improve the retention rate
  - Built a data exchange prototype with Apache Kafka and a production system with AWS S3
  - Built an ETL pipeline to anonymize customer data to comply with GDPR regulations

- **Allstate** — Menlo Park, CA
  Research Analyst — *Jul 2016–Sep 2018*

- Tech stack: Python, pandas, Spark, Julia, PostGIS, Keras, TensorFlow
- Trained machine learning models and using a large internal telematics dataset to predict risk and develop new product ideas
- Co-authored a research paper titled "Real-time Prediction of Intermediate-Horizon Automotive Collision" with the Stanford Intelligent Systems Lab using Monte Carlo simulation and deep learning

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Education

- **University of California, Santa Barbara** — Santa Barbara, CA
  MS Mechanical Engineering — *Dec 2014*

  - Tech stack: MATLAB, SolidWorks, LaTeX
  - Thesis research: Designed and built an experiment to measure Faraday waves using a novel image processing technique for 3D high-speed mm-resolution measurement over a surface area of $225\,\mathrm{cm}^2$

- **University of California, Santa Barbara** — Santa Barbara, CA
  BS Physics & BS Mechanical Engineering — *June 2010*