LOUIS RAISON

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EDUCATION

MIT SLOAN SCHOOL OF MANAGEMENT

Master of Business Analytics, Operations Research Center - GPA 4.9/5

- Received "Best Capstone Award"
- · Coursework: Optimization Methods, Machine Learning, Supply Chain, Operations Management.

ÉCOLE POLYTECHNIQUE (L'X)

M.Sc.in Engineering, B. Sc. in Engineering - GPA 3.9/4

- Applied Mathematics and Computer Science major, specialized in High Performance Computing
- Relevant coursework: Parallel/Distributed Computing, Computer Architecture, Operations Research, Machine Learning
- Invented a secure, direct exchange protocol for trading digital goods using Ethereum smart contracts technology, 2nd place at Blockchain Innovation Challenge, Columbia University.

WORK EXPERIENCE

ZIPLINE

Data Platform Engineer

San Francisco, CA (Remote) September 2024 - Now

- Contributed significantly to the redesign of the data platform using django+React, unlocking views that empower data-driven decisions.
- Automated daily reports through Snowflake and Mode to monitor the health of data pipelines, slashing the need for active monitoring.
- Worked with key users to create a roadmap and implement a plotting tool to facilitate test flight triage and sharing between teams.

Data Scientist

- Implemented a ML model that predicts product loss on delivery, to improve packing decisions and guarantee critical delivery needs.
- Coordinated team of Columbia students to create a packing algorithm with MIO and heuristics, reducing number of packages by ~10%.
- Built data analysis packages and pipelines to support a brand new drone redesign.
- Developed interactive data visualization tools in JavaScript with Plotly/AG Grid to give engineers easy access to review test flight data.

DYNAMIC IDEAS LLC

Senior Data Scientist

- Developed cutting-edge transportation optimization algorithms to improve efficiency in large school districts across the United States.
- Created optimization models for the supply chain and market model for a billion-dollar revenue fertilizers company.
- Built and deployed emergency department nurse scheduling and staffing level optimization algorithms for Hartford Hospital in Julia.
- Facilitated weekly training for data scientists/analysts on topics ranging from data analytics packages to high-level study of algorithms.

Data Scientist

- Designed and implemented optimization algorithms for the transportation departments of 6 school districts in the United States.
- Developed a novel approach for street crossing restrictions within the first employment month, addressing critical school district needs.
- Improved multiple existing heuristic/optimization algorithms, making them more flexible, readable, and cutting run time by up to 90%.
- Established a project management system for the company for tracking and general organization, using Notion and Teams.

MIT SLOAN SCHOOL OF MANAGEMENT

Research Assistant for Professor Dimitris Bertsimas

- Developed mixed-integer optimization and graph algorithms to deduct average speeds on maps using 10M+ GPS bus location logs.
- Collaborated with Swiss Re to predict economic losses from natural disasters and generated 20% improvement of loss prediction.

BMW GROUP / MIT SLOAN SCHOOL OF MANAGEMENT

Capstone Project for the Master of Business Analytics

- Classified vehicle brake noises using advanced deep learning techniques (LSTM, CNN) to reduce needs for expert manpower.
- Produced various client deliverables (presentations, posters, videos, and interface) to ensure the work would be easily integrated.

NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY

Visiting Researcher

Created a music composition tool using advanced Deep Learning techniques (LSTM-RNN) to facilitate interactive composition.

ADDITIONAL INFORMATION

- Technical Skills: Python, Julia, SQL, Web Dev (React, django), Git, Docker, ML packages (Tensorflow, Pytorch, Scikit-Learn)
- · Soft Skills: mentorship, strategic thinking, strong communication, active listening, organization, leadership, curiosity.
- Open-source development: creator of *ipyaggrid*, Python library enabling interactive tabular data visualization in a notebook.

Cambridge, MA 2019 - 2020

Palaiseau, France

2016 - 2019

Cambridge, MA

September 2019 - August 2020

Cambridge, MA

February 2020 - July 2020

Tsukuba, Japan April 2019- August 2019

Waltham, MA

November 2023 - August 2024

November 2022 - September 2023

September 2020 – October 2022