Lee Luderman

Software Engineer | Data Scientist | Expertise in Python, R, and MATLAB

About Me

I am a versatile professional with a strong background in data analysis, software development, and financial management. My recent roles involved developing automation solutions with Python and creating a responsive website using Next.js and React. With a master's degree in mathematics and expertise in MATLAB, R, and Python, I excel at transforming complex data into actionable insights. I am currently seeking software engineering, data science, and data analytics opportunities in Sydney.

Contact

Born on 15/01/1996, Age 28

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Car Available, Driving License C

Programming Languages

Python

MATLAB

R

Git

React

HTML

CSS

C/C++

EDUCATION

2017-2023

Master of Mathematics (MMath)

Exeter, UK

University of Exeter

Upper Second Class (2:1) with Honours

My master's studies focused on the intersection of mathematics and computer science.

Mathematical Modeling with MATLAB:

- Applied mathematical concepts to real-world problems using MATLAB.
- Developed skills in numerical analysis, optimization, and simulation.

Data Analysis and Statistical Modeling with R and Python:

- Utilized RStudio for data manipulation, visualization, and statistical inference.
- Analyzed complex datasets to derive actionable insights.

WORK EXPERIENCE

2022-2023

Restoration Technician

Wagga Wagga, NSW

RYSA Group LTD

Responsibilities & Achievements

- Managed data recording and authored comprehensive restoration reports.
- Automated customer data processing by developing an email pipeline using Python and the Gmail API.
- Designed and launched the company website using the Next.js React framework.

2013-2020

Bookkeeper

London, UK

East London Pallets LTD

Responsibilities & Achievements

- Digitized financial accounts, improving accuracy and efficiency in tracking expenses, sales, and stock.
- Implemented a marginal tax scheme, reducing VAT costs through optimized stock records.
- Created performance dashboards, providing directors with clear, actionable insights.
- Successfully led a change of use application, securing local council approval for the company's strategic growth.
- Developed time-series graphs in R to illustrate the impact of COVID restrictions on business performance, securing government support.

PROJECTS

Master Thesis
2022

Pricing Asian Options in Matlab, Implemented a well-known pricing model in MATLAB and improved its efficiency by reducing the time complexity of the algorithm., View on Github

End-of-year Project
2020

Marine Heat Waves and Their Effects on Phytoplankton, Analyzed large satellite datasets to identify marine heat waves and model their impact on phytoplankton in R., View on Github

Soft Skills and Strengths

Effective Communication | Problem Solving | Team Collaboration | Leadership | Adaptability | Time Management | Attention to Detail | Critical Thinking | Conflict Resolution | Decision-Making | Emotional Intelligence | Client Relations | Flexibility | Interpersonal Skills | Resilience

Professional Skills

Data Analysis | Data Visualization | Statistical Modeling | Project Management | Client Relations

Other Interests

Gymnastics | Motorbiking | Gym | Gaming | Travelling | Chess

Download My CV

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Technical Expertise and Applications

Data Analysis

Python: Analyzed a dataset containing approximately 2 million nested data points related to job listings on Indeed (UK) during the COVID-19 pandemic. Calculated key metrics to assess the broader job market, drawing conclusions about the impact of COVID restrictions and their influence on employment trends.

R: Investigated the effects of marine heatwaves on phytoplankton using large spatial-temporal datasets recorded by satellites (e.g., sea-surface temperature and chlorophyll concentration). Employed regression analysis and developed an ARIMA model to describe the causal relationship between these variables.

Modeling and Simulation

MATLAB: Conducted extensive research on option pricing theory for a master's thesis, exploring the binomial option pricing model and the Black-Scholes method. Developed an alternative numerical model for path-dependent (Asian) options, which eliminated the need for path searching, significantly reducing computational complexity while maintaining accuracy. Validated the model through Monte Carlo simulations and corroborated the results with established findings in the literature.

Software Development & Automation

Next.js: Developed a company website using React, Tailwind CSS, and HTML within the Next.js framework. Integrated dynamic features that interact with the company's reporting software API, displaying real-time data on job completions and geographical coverage.

Automation: Automated a manual data entry task by developing a Python script utilizing the Gmail API to scan business emails for new work orders. Extracted information from attached PDFs and populated reporting software autonomously. Deployed the script on a headless Raspberry Pi with remote update capabilities via Git.

CERTIFICATES

HARVARD Online

- CS50: Introduction to Computer Science (*EDX, 2020*)
- CS50's Web Programming with Python and JavaScript (*EDX, 2021*)

Personal Achievements

- **International Competitor**: Represented England at the Cheerleading Worlds competition, placing 5th.
- **National-Level Gymnast**: Secured 2nd place in the UK at a national gymnastics competition, demonstrating exceptional athletic skill and dedication.
- **Olympic Performer**: Performed in halftime entertainment shows for the London 2012 Olympics, showcasing talent on an international stage.
- **Entertainment Experience**: Participated in television, film productions, and live shows, performing for audiences exceeding 20,000 people.
- **First-Generation University Graduate**: Broke new ground as the first in my family to attend university, illustrating resilience and a commitment to academic and personal growth.