THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Department of Statistics

Current Students Q&A session

Plan for today:

Sarah McManus – brief introduction of her role (5 minutes)
Kyle Morton – MSc Data Science (5 minutes)
Melissa Luk- MSc QMRM (5 minutes)
Anastasiia Katenko- MSc Statistics (Financial Statistics)(5 minutes)

Q&A

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Sarah McManus – MSc Programmes Manager

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Faculty and Admin Team (Professional Service Staff)

We are a close-knit and collegiate group of academics and administrators.

See our ‘People’ and ‘Research’ webpages for information about who we are and what we work on.

How can the Programme Manager support me?

- Answer non-academic queries related to Department and School policies e.g. well-being, exams etc
- Co-ordination of Staff-student liaison committee
- Plan and organise events
- General support throughout your LSE journey

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Staff-Student Liaison Committee (SSLC)

- Meets once in Autumn Term and once in Winter Term – student rep(s), Programme Directors, MSc Programmes Manager
- School-wide Graduate Taught Forum also termly
- Volunteer to be a rep – raise your profile in the Department, rewarding experience, looks great on your CV.

How can LSE support me?

Check out:

Careers including the What do LSE graduates do? page
LSE life (workshops and one-to-one advice on academic matters)
Faith centre
Student union

Find out more by exploring LSE's Offer Holders website and reading the Graduate Offer pack.

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Kyle – MSc Data Science

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Kyle: About Me

- Completed Canadian undergrad in Honours Economics, Information Systems
- Worked on research and teaching of Machine Learning
- Previously did debate, student journalism, investment
- Currently interested in the energy sector

Why I Love LSE Stats

- Departmental Networking & Friendships (E.g. Cumberland, Stats Ball, Get-Togethers)
- Extracurricular Opportunities & Support (Statistics Challenge, Competitions)
- Powerful Mix of Theory and Application

Statistics Ball, 2024

General Advice

- Always be open opportunities, especially to try something new
- Follow your interests to stay motivated
- Try new approaches in all things; learn from issues quickly and never despair!

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Melissa– MSc QMRM

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Melissa

Journey

- BSc Statistics, Economics and Finance in UCL
- QMRM student in LSE

work experience

HSBC Summer intern

- customer experience team

NatWest Summer intern

- real estate finance

my career

- trainee actuary in a local pension fund consulting firm

Hobbies

- skiing
- travelling
- watching formula 1

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

My experience as an LSE student

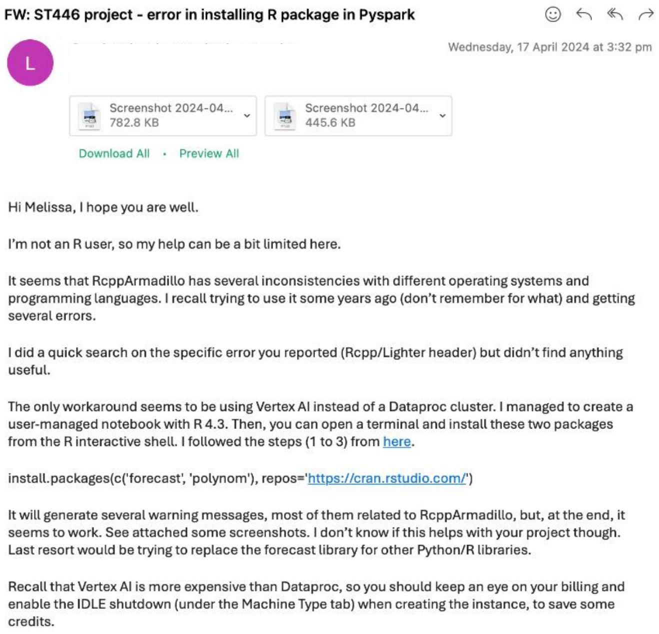
Some modules I selected :
- Reinforcement learning
- Distributed computing
- Derivative

Own development

Practical knowledge

Making Friends and Building Connections

great support



FW: ST446 project - error in installing R package in Pyspark

Wednesday, 17 April 2024 at 3:32 pm

L

Screenshot 2024-04... 782.8 KB

Screenshot 2024-04... 445.6 KB

Download All · Preview All

Hi Melissa, I hope you are well.

I'm not an R user, so my help can be a bit limited here.

It seems that RcppArmadillo has several inconsistencies with different operating systems and programming languages. I recall trying to use it some years ago (don't remember for what) and getting several errors.

I did a quick search on the specific error you reported (Rcpp/Lighter header) but didn't find anything useful.

The only workaround seems to be using Vertex AI instead of a Dataproc cluster. I managed to create a user-managed notebook with R 4.3. Then, you can open a terminal and install these two packages from the R interactive shell. I followed the steps (1 to 3) from here.

install.packages(c('forecast', 'polynom'), repos='https://cran.rstudio.com/')

It will generate several warning messages, most of them related to RcppArmadillo, but, at the end, it seems to work. See attached some screenshots. I don't know if this helps with your project though. Last resort would be trying to replace the forecast library for other Python/R libraries.

Recall that Vertex AI is more expensive than Dataproc, so you should keep an eye on your billing and enable the IDLE shutdown (under the Machine Type tab) when creating the instance, to save some credits.

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Future advice :

1.Make good use of your time

- What is your aim after this master ?
- Prioritise your task based on this aim

2. Use available resource

- Office hours from lecturer/professor, peer support
- Peer buddy

3. Enjoy your one-year journey as a master's student!

Anastasiia – MSc Statistics (Financial Statistics)

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Anastasiia Katenko

Before LSE

- **BSc Economics**
- Oliver Wyman Internship
- Fintech Data Analyst (Tinkoff bank)

During LSE

Courses: Financial Statistics, Time Series, Statistical Inference, Deep Learning, Quantitative Text Analysis, Reinforcement Learning, Bayesian Machine Learning
Career Consultations
Social Events

After LSE options:

- **Graduate Programmes (usually expect you to sponsor Graduate Visa, 1-2 years)**
- **Research / PhD**
- **Juniour Positions in Tech, Finance, Telecom, E-commerce etc - DIVERSITY**

I am going to Moody’s Analytics as a Banking Research Team (yes I wrote python code on paper during the interview)

Projects during the MSc Statistics

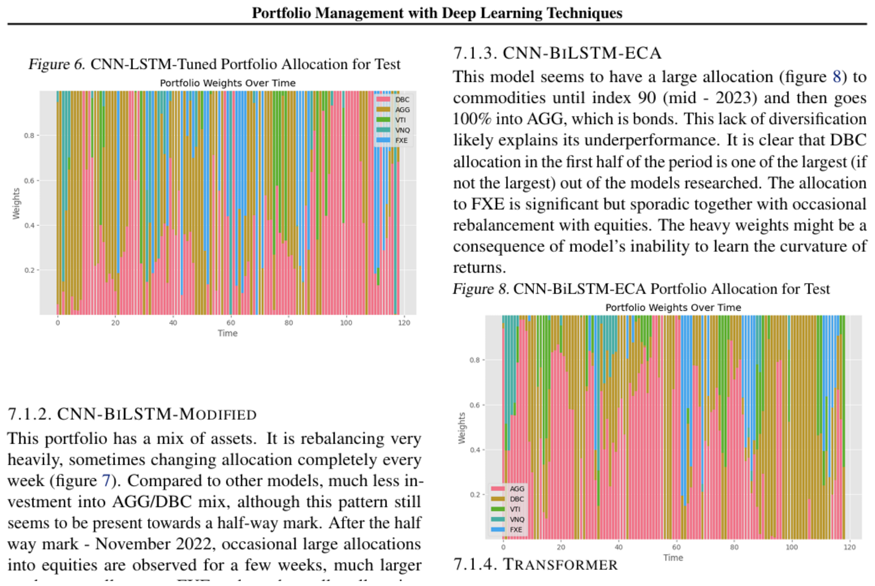
1. Portfolio Management with Deep Learning
2. Bayesian Prediction of Seismic Bumps
3. How Neural Network Generated Headlines for Economic News differ semantically from Human-generated
4. High-frequency Reinforcement Learning Trading

You can apply what you have learnt in different spheres !

Advice: try to experiment with your research interests

Do the course selection fast!

Always check the formula for mark!



Portfolio Management with Deep Learning Techniques

Figure 6. CNN-LSTM-Tuned Portfolio Allocation for Test

7.1.2. CNN-BiLSTM-Modified

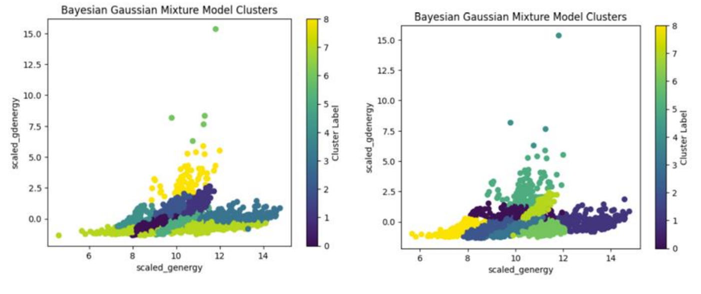
This portfolio has a mix of assets. It is rebalancing very heavily, sometimes changing allocation completely every week (figure 7). Compared to other models, much less investment into AGG/DBC mix, although this pattern still seems to be present towards a half-way mark. After the half way mark - November 2022, occasional large allocations into equities are observed for a few weeks, much larger

7.1.3. CNN-BiLSTM-ECA

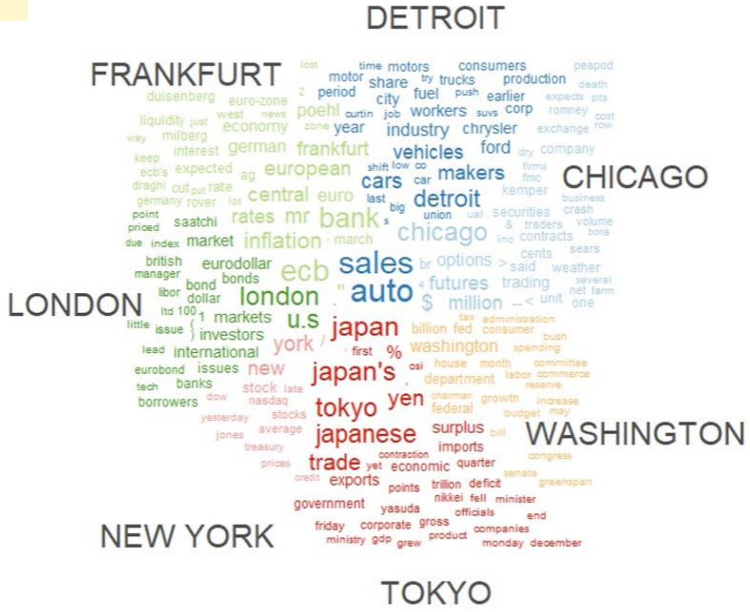
This model seems to have a large allocation (figure 8) to commodities until index 90 (mid - 2023) and then goes 100% into AGG, which is bonds. This lack of diversification likely explains its underperformance. It is clear that DBC allocation in the first half of the period is one of the largest (if not the largest) out of the models researched. The allocation to FXE is significant but sporadic together with occasional rebalancement with equities. The heavy weights might be a consequence of model's inability to learn the curvature of returns.

Figure 8. CNN-BiLSTM-ECA Portfolio Allocation for Test

7.1.4. Transformer



(a) Weight_concentration_prior = 0.15 (b) Weight_concentration_prior = 0.35



THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Overall Advice:

Try to find your spots in London where you feel comfortable

Do not be hard on yourself during first term, most exams are in summer

Take the initiative! Life becomes better when you suggest your peers to take a walk together

Don’t forget to browse the LSE communities and events on the web-site! They occur every week!

Start projects beforehand! Reach out to your peers and find matching interests

Start job applications for graduate programmes in September

Do not underestimate yourself!

Above 70 is distinction, which is way more difficult to achieve than you may think, don’t be too worried!

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Questions?

Sarah McManus

MSc Programmes Manager

Getting In Touch

I look forward to welcoming you to the Department of Statistics soon!

If you have any queries in the meantime, you are welcome to contact me at stats-msc@lse.ac.uk or s.mcmanus@lse.ac.uk