Daniel Pereira De Abreu

MSci Computer Science & Artificial Intelligence Graduate

MSci Computer Science with Artificial Intelligence Graduate at the University of Nottingham, aspiring Machine Learning Engineer. I have undertaken multiple university and personal projects alongside three internships focused on Machine Learning. Recently, I completed my dissertation on Synthetic Data Generation for Cancer Prognosis Prediction alongside a Big Data project on scaling time-series classification. During my latest internship, I utilized Python and Typescript to develop a JupyterLab extension that integrated with diffusion models generated using PyTorch. By employing version control with Git and adopting an agile methodology, I was able to iteratively meet goals and deadlines efficiently. To view all of my projects, books read and more information, my portfolio website can be found at the end of the resume.

Work History

Human-Centred Data Science Summer Intern

Vis4Sense, Nottingham

- Designed and implemented a JupyterLab extension to capture and store the history of generated images from a diffusion model made with Pytorch
- Utilized Typescript and Python within a Conda environment to ensure smooth integration
- Facilitated easier tracking of performance changes with hyperparameter adjustments, reducing the reliance on trial-and-error methods and improving the efficiency of the tuning process
- Laid the groundwork for ongoing project development, which is being expanded and refined by other developers to further expand it

Artificial Intelligence Engineer Summer Intern

BlueSkeye AI, Nottingham

- Trained and improved the capability of a ML facial recognition model in understanding mental health based upon apparent expressions such as valence/arousal based on facial action units and car cabin driver behaviours
- Created data parsing scripts to turn human annotated datasets into CSV files for comparison with the software made annotations
- Created clusters with DBScan to compare human made data and synthetic data
- Created and assisted in a data collection programme of 100 participants

Machine Learning Software Architect Intern

Ideagen, Nottingham

- Developed a meeting summariser using state of the art machine learning models
- Utilised transformer-based models like BERT and T5 for summarizing natural language, leveraging their ability to handle sequential data with attention mechanism and positional embeddings for accurate and efficient summarization.
- Implemented Named Entity Recognition using NLTK and SpaCy libraries to identify and classify named entities (e.g., dates, people, locations) in text, facilitating content categorising and enabling efficient information retrieval in meeting summaries
- Employed the all-miniLM-L6-v2 sentence-transformers model to map sentences to a vector space and the cosine similarity algorithm to personalise summaries based on user-input keywords, enhancing relevance

Contact

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Skills

- Python
- TensorFlow
- PyTorch
- Keras
- R
- MATLAB
- Pandas
- Numpy
- Scikit-learn
- SQL
- TypeScript
- Git
- Apache Spark
- Data Wrangling
- Predictive Modelling
- Deep Learning
- NLP
- Bayesian Statistics

Languages

English ●●●●●

Portuguese ●●●●●

Spanish ●●●●●

German ●●●○○

Restaurant Manager on Duty & Waiter

Pizza Express, Harpenden, Bedfordshire

- Led and directed team members on effective operations and procedures
- Delivered in-depth training to workers in food prepararion and customer-facing roles to promote strong team performance
- Resolved challenging customer complaints to full satisfaction, promoting brand loyaltyand maximizing repeat business
- Continuously evaluated business operations to effectively align workflows for optimal area coverage and customer satisfaction
- Promoted positive atmosphere and went above and beyond to guarantee each customer received exceptional food and service, alongside staff satisfaction and minimization of overtime

John Lewis Partner (Apple Champion)

John Lewis Victoria Centre, Nottingham

- Answered product questions with up-to-date knowledge of sales and store promotions.
- Maintained internal visual merchandising and in-store displays and ensure store appearance always met company standards to drive continuous sales.
- Ensured all staff met the Apple "seed" training
- Trained and developed new sales team associates in products, selling techniques and company procedures.
- Worked alongside retail representatives such as Apple, Bose, Bang Olufsen and Sony to boost product knowledge and sales.

Education

Master of Science: Computer Science & Artificial Intelligence

University Of Nottingham - *Nottingham*

A Level

- A Level Computer Science - A
- A Level Geography – A
- A Level Mathematics – A
- National IT Diploma - A*/A*

Luton Sixth Form College - Luton

Certifications

Deep Reinforcement Learning (Hugging Face)
Deep Learning with PyTorch for Medical Image Analysis (Udemy)
Natural Language Processing (Udemy)
Machine Learning A-Z Python & R (Udemy)
The Complete Cryptocurrency Course (Udemy)
Java Tutorial for Complete Beginners (Udemy)
Online E-commerce Success (Udemy)
C# Unity Development (Udemy)
RPG Game Development in Unity (Udemy)
Forex Trading A-Z (Udemy)
Ethical Hacking (Beginner-Intermediate) (Udemy)
Facebook Marketing 2020 (Udemy)

References

References will be available upon request

(More available at www.danielabreu.co.uk)

Hobbies

- Powerlifting
- Visit new locations
- Read new published papers
- Read books/manga
- Cook new recipes
- Videogames

Accomplishments

- Developed my own portfolio website
- Created and run an interactive and dynamic e-commerce website
- Received 1st grade on all AI related modules at university such as Machine Learning, Data Science, Computer Vision, AI Methods, Reinforcement Learning and Big Data
- Made a car sales system using visual basic as my first project at 16
- Achieved record breaking sales at John Lewis

Projects

More details on these projects can be found at "danielabreu.co.uk"

- Gesture-controlled 3D Hologram System
- Classification & Segmentation CNN in MATLAB
- Ant Colony Optimization
- Flu Shot Learning
- ChatGPT Voice Assistant
- Turtle-Bot Frontier Exploration Simulated
- "CatchMeUp" (Meeting Summariser)
- "PromptAll" – JupyterLab Extension
- Synthetic Data Generation for Cancer Prognosis Detection
- Scaling of time-series classification in Big Data