CONNOR BROOK

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https://github.com/Viibrant

I am an adaptable, hardworking, and social individual currently in my final year of my BSc. Data Science, aiming to enter ML Engineering with a long term dream of becoming a Research Scientist.

SKILLS & TECHNOLOGIES

Proficient in Python, R, Pandas, SQL, NumPy, Matplotlib, NLTK, scikit-learn, PyTorch, Keras, Flask, React/NextJS, Git, GitLab, and Jupyter.

EXPERIENCE

JULY 2022 – AUG 2022

ML Intern, Roke Manor Research

- Collaborated with two peers and two tech leads to research and apply novel NLP techniques for a downstream task of word sense disambiguation. Used GitLab to effectively manage and track progress.
- Presented findings to the company and board of directors with effective communication skills.
- This experience taught me the importance of R&D and effective communication skills in conveying complex information to different audiences.
- Technologies utilised for the project include *PyTorch, NLTK, Pandas, Keras and Transformers.*

AUG 2018 – MAR 2020

Sales Assistant, TJ Morris (Home Bargains)

- Provided exceptional customer service and established positive relationships with the local community
- Demonstrated resilience and composure in highly stressful and fast-paced situations, especially during the busy Christmas period
- Developed my interpersonal and collaborative skills by working effectively with colleagues in a dynamic and intense environment
- Exhibited flexibility and versatility by volunteering to take on additional responsibilities, including cleaning and managerial duties outside of my role.

EDUCATION

BSC (HONS) DATA SCIENCE AND ANALYTICS, University of Portsmouth

SEP 2020 – JUNE 2023 (PLANNED)

- Dissertation on generating Minecraft schematics using Convolutional Autoencoders and Transformers.

A-Level, Roding Valley Sixth Form

SEP 2018 – JUNE 2020

- Subjects studied: Maths (including Statistics, Calculus, and Linear Algebra), Further Maths, and Computer Science

SEP 2017 – JUNE 2018

GCSE, Debden Park High School - Achieved 8 GCSEs A*-B, including Maths and English.

PROJECTS

MineGen - Deep Learning-based Minecraft Schematic Generator

- Dissertation aimed at generating Minecraft structures
- Built a dataset of schematic files and their metadata through web scraping.
- Experimenting with convolutional autoencoders and transformers to learn block embeddings.
- Looking to utilise the latent spaces of the 3D voxel data and metadata to provide semantic understanding and enhance the quality of the generated structures.

MonkeyLook - Classification of monkey species

- Developed a Convolutional Neural Network (CNN) model for classifying different species of monkeys using PyTorch.
- Addressed a knowledge gap in computer vision and developed skills in deep learning techniques and Python programming.

connorData.Science - Portfolio website

- Developed a personal website to showcase my CV and projects using WSGI application dispatching
- Applied system administration concepts such as registering for a TLD, and maintaining DNS records
- Automated fetching with GitHub webhooks on my PythonAnywhere web server.
- Gained practical experience in web development by creating and publishing my first portfolio website, providing me with a foundational understanding of web technologies and best practices.

QuizNSum - Summarisation & Question generation

- Developed an undergraduate natural language processing project that utilises T5 and Pegasus to generate summaries and questions from input text data. Served as a web app using NextJS, Flask, ngnix.
- Worked as the senior developer and team lead, ensuring that all team members adhered to established coding conventions and wrote Pythonic code, and proper git practices (branching, pull requests, code review)
- Wrote custom workflows for commit hooks, including Pylint, flake8, Black, and reviewdog, to automate code quality checks and improve overall codebase maintainability.

Automated Checkout - A Level Coursework

- Designed and implemented a non-barcode Point of Sale (PoS) system using YOLOv3 real-time object detection algorithm and OpenCV video capture.
- Utilised a JSON file for cost calculation to demonstrate a proof of concept.
- Demonstrated proficiency in handling generators to display video data in a web browser.

are-we-together - Common calendar events (lectures)

- Command-line tool that automatically finds common lecture events among students' university timetables in iCalendar (.ics) format.
- Utilises pandas DataFrame operations, including grouping, concatenation, and aggregation.
- Familiarisation with Python's argparse library for parsing runtime flags.
- Written to solve the manual task of finding shared lecture events among my classmates, and to enhance my proficiency in Python data manipulation.

covid-dashboard - Data visualisation

- Developed a web application that utilises the NHS API to retrieve and graph COVID 19 statistics, using Plotly, Dash, Pandas, and GeoPandas.
- Gained experience in data visualisation and storytelling by writing interactive graphs that are easy to interpret

ACTIVITIES & INTERESTS

In my spare time I'm always reading up on advancements in Deep Learning or building projects to stay ahead of the curve; I do this because I genuinely love neural networks. Additionally, I am also passionate about martial arts, as it allows me to cultivate self-discipline and maintain my fitness.