Sai kumar Murali krishnan

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Machine Learning Engineer

EDUCATION

Monash University Expected December 2023

Bachelor of Applied Data Science Honours *Melbourne, VIC*

- WAM/GPA: 86
- Achievements: Dean's List Award for academic excellence, Summer and Winter Research scholarships

EXPERIENCE

Machine Learning Engineer Intern November 2022 – February 2023

Canva

- Developed a debiasing framework for StableDiffusion, a state-of-the-art text to image model
- Conducted research and implemented solutions to mitigate bias in the outputs generated by StableDiffusion, specifically addressing harmful and nonrepresentative biases in sensitive categories such as gender and ethnicity

Data Science Intern July 2022 – October 2022

DiGiCOR

- Managed a team of four to build a sales data analysis dashboard using Streamlit, integrating data from NetSuite's REST API to boost productivity

Winter Research Assistant June 2022 – July 2022

Monash University

- Developed a genetic programming framework using simulation in Julia to address a game theoretic problem **here**
- Collaborated with a professor to study journal dynamics in the field of science using the framework

Summer Research Assistant November 2021 – January 2022

Monash University

- Parsed and analyzed commit data from over 30,000 deep-learning libraries using GitHub's REST API and Python
- Implemented extraction, tagging, and analysis techniques to understand the evolution of popular deep-learning libraries, utilizing spaCy for NLP processing

COMMUNITY & LEADERSHIP

President March 2021 – Present

Monash Association of Coding (MAC)

- Conducted 4 successful coding workshops in Python, covering topics such as FastAPI, discord.py, and web development, reaching over 200 attendees
- Led 15 weekly mock technical interviews with LeetCode, preparing students for software-development roles
- Organized and oversaw MAC x Hacksprint, a two-week hackathon attracting more than 200 participants

PROJECTS

project-maidenless | *Streamlit, GPT2, Natural Language Processing (NLP), Transfer Learning* **GitHub**

- Created a Streamlit application that inferences a fine-tuned version of GPT2 on two university love letter pages, comprising over 20k messages
- Implemented transfer learning to fine-tune the pre-trained GPT2 model for improved performance on the specific NLP task
- Utilized NLP techniques to process and analyze the large corpus of love letters

uwucode | *Language Design, Rust* **GitHub**

- Created a toy programming language in Rust, with a homemade parser, as an exploration into language design

Mini Melbourne | *Fullstack, Live data, React, Mapbox, FastAPI* **GitHub - DevPost**

- Developed a real-time train map of Melbourne, showcasing the locations of up to 150 trains in Melbourne
- Won the PwC Data Analytics prize at UniHack 2022 for the project
- Utilized FastAPI for the backend and React for the frontend, along with Mapbox for mapping capabilities

SETool | *Data Visualisation, Python, Scraping, Dash, Plotly, Heroku* **GitHub - Site**

- Designed and built a web dashboard for comparing course reviews, used by over 1000 students for their education

Technical Skills

Languages: Python, R, Julia, Rust, C/C++, MATLAB, Java, Wolfram
Libraries: Data science (Pandas, NumPy, SciPy, PyTorch, Seaborn, Streamlit), FastAPI, Dash/Plotly
Mathematics: Graph Theory, Computational methods, Optimisation and Operations Research, Linear Algebra, Calculus, Statistics