Sai Kumar Murali Krishnan

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EDUCATION

Monash University   February 2020 - December 2023
Bachelor of Applied Data Science Advanced (Honours)   *Melbourne, VIC*
- WAM/GPA: 87
- Achievements: Dean's List Award for academic excellence, Summer and Winter Research scholarships
- Thesis: Bias Modelling and Mitigation in Diffusion Models

EXPERIENCE

Canva   Melbourne, VIC
Machine Learning Engineer   *Expected Start: February 2024*
- To be continued...

Machine Learning Engineer Intern   *November 2022 – February 2023*
- Developed a debiasing framework for Stable Diffusion for Canva's Text to Image feature
- Researched and developed bias mitigation strategies targeting Stable Diffusion, addressing harmful and nonrepresentative biases in sensitive categories such as gender and ethnicity

DiGiCOR   Melbourne, VIC
Data Science Intern   *July 2022 – October 2022*
- Managed a team of four to build a sales dashboard using Streamlit, pulling data from NetSuite's REST API

Monash University   Melbourne, VIC
Winter Research Assistant - with Dr Julian Garcia **(GitHub)**   *June 2022 – July 2022*
- Developed a genetic programming framework using simulation in Julia to address a game theoretic problem

Summer Research Assistant - with Dr Xiaoning Du **(GitHub)**   *November 2021 - January 2022*
- Parsed and analyzed commit data from over 30,000 deep-learning libraries using GitHub's REST API and Python to understand the evolution of deep-learning libraries for AutoML

COMMUNITY & LEADERSHIP

Monash Association of Coding (MAC)   March 2021 – September 2023
President
- Overseen growth to nearly 1000 members, running a technical careers evening with over 100 attendees
- 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**
- Used transfer learning to fine-tune a GPT 2 on two university love letter pages, comprising over 20,000 pages
- Created a Streamlit application that inferences a fine-tuned version of GPT2 to generate 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: Pandas, NumPy, SciPy, PyTorch, Seaborn, Streamlit, TensorFlow, HuggingFace, FastAPI, Dash/Plotly
Mathematics: Graph Theory, Operations Research, Linear Algebra, Calculus, Statistics, Numerical Methods