JDEN GOH

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EDUCATION

Nanyang Technological University — Jul 2022 – Present
Bachelor of Computing in Computer Science — *GPA:* 4.41

CAREER OBJECTIVES

NTU Computer Science undergraduate with self-driven attitude and strong interest in both software engineering and artificial intelligence. I am dedicated to giving back to the community and believe in the potential of AI-integrated applications in healthcare and education sectors. Constantly seeking challenges that can foster personal growth and create meaningful value for my organisations.

WORK EXPERIENCE

Syanpse — Jan 2025 – Present
Full Stack Developer Integrating AI

- Developing and enhancing Azure OpenAI-powered chatbot implementing RAG
- Integrating Quart backend to Angular for seamless communication
- Participating in SPRINT meetings for progress tracking, issue resolution, and development alignment
- Exploring Agentic AI frameworks including LangGraph, AI Swarm and Autogen

Welfare Service Club - Friends of Children — June 2023 – August 2024
Centre Head

- Led a team of 20 student volunteers to teach English and Math to over 25 service users from underprivileged families
- Planned and conducted Life-skills lessons to inculcate and nurture values in service users across Primary and Secondary level
- Collaborated with 14 other centres to organise June and December events for over 300 service users

Computhink — Jul 2023 – Jun 2024
Code Mentor

- Held coding courses for over 15 students across Primary and Secondary levels
- Taught basic coding concepts using Scratch and Minecraft Education
- Conducted Data Science lessons cover both concepts and coding, covering Numpy, Pandas and Scikit Learn library

Hummingbird Bioscience — May 2023 – Aug 2023
IT Intern

- Spearheaded project to update company's production database (MariaDB), hosted on Azure
- Facilitated in creation of user documentation and conducted UAT for a new application for inventory management, tracking over 1000 company assets
- Resolved issues and enhanced existing email notifications automation for 2 departments, scheduled with cronjobs
- Compiled and install required software from source on Linux VMs (Ubunthu)
- Aided in improvement to company's in-house Nodejs application written in JavaScript, hosted on Azure
- Utilised Git and Github for version control
- Exposure to cloud computing platform (Microsoft Azure), basics of firewall and networking

PROJECTS

Realtime Stockmarket Analysis | *Langchain, RAG, FAISS, LSTM, Streamlit* — Feb 2025 – Present
Lead Developer, Gen AI and RAG Integration

- Built financial news pipeline that automates extraction, processing, and structuring of real-time stock market news
- Developed RAG-based AI Retrieval System leveraging FAISS and LangChain to enhance financial insight and stock trend analysis
- Engineered custom AI prompts to refine LLM-based market responses by integrating financial sentiment and stock trends to improve AI trading decisions

- Designed and deployed an interactive dashboard using Streamlit for market insights visualisation

Sentiment Analysis on Rotten Tomatoes | *RNN, CNN, BiLSTIM, BiGRU*   Sep 2024 – Nov 2024
Model Training and Fine-tuning
- github.com/jdengoh/SC4002-NLP
- Developed and trained deep learning models to classify movie reviews as positive or negative
- Utilised pre-trained Word2Vec embeddings to improve word representations, and tested different Out-Of-Vocabulary handling approaches to handle unseen words
- Built and evaluated an Ensemble model, integrating multiple models and achieving final accuracy of 78%

Multidisciplinary Competition Project | *RPI, YoloV5, UNIX, bash*   Aug 2024 – Oct 2024
RPI Developer and Computer Vision
- github.com/jdengoh/MDP_Grp4_rpi
- Achieved 9th place and 15th place in Task 1 and Task 2 respectively
- Implemented a multi-process architecture with Python's multiprocessing library to manage 5 concurrent processes
- Established a queue system and lock management to ensure synchronised, real-time communication between the Raspberry Pi, STM board, Android application, algorithm, and image inference server
- Utilised YOLOv5 for real-time object detection, trained on a dataset of 2,000+ annotated images annotated via Roboflow
- Designed and deployed image inference CRUD API server using Python Flask

NUS - NCS Innovation Challenge | *Data Pipeline, API, Gen AI, OpenCV, YoloV3*   Feb 2024 – Apr 2024
Data Pipeline and Machine Learning Engineer
- github.com/jdengoh/TransportGPT
- Implemented to provide real-time updates and navigation assistance to drivers
- Set up pipelines to pull live traffic data from APIs (LTA Datamall)
- Adopted You-Only-Look-Once (YOLO) system to analyse real-time images pulled from APIs
- Implemented Langchain framework for use in model's contextual awareness
- Integrated Geopy to process location data

EatAlready - Web Application | *Django, SqLite, Javascript, HTML/CSS, API*   Jan 2024 – Apr 2024
Backend Developer
- github.com/jdengoh/SC2006-project
- Developed an itinerary and food recommendation web app using Django
- Utilised Django as backend and Google API
- Adopted Django REST Framework
- Developed RESTful API framework used to interact with Frontend and Database (SQLite)

Titanic Analysis | *KNN, Random Forest Classifier, XGBoost*   Feb 2023 – Apr 2023
Machine Learning Engineer
- github.com/jdengoh/Titanic-Analysis
- Analysed survival rate for Titanic disaster using Machine Learning Models
- Employed functions such as chi-squared test to analyse and select best features to be used for Machine Learning Models
- Adopted K-Nearest Neighbour, Random Forest Classifier, and XGBoost to achieve accuracy score above 70%

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres, MariaDB, MySQL), JavaScript, HTML/CSS
Frameworks: Flask, FastAPI, Serverpod, Angular
Developer Tools: Git, Docker, Bash
Libraries: pandas, NumPy, PyTorch **Others**: Linux(Debian, Ubuntu, Fedora), Neural Network, Machine Learning, Natural Language Processing