

LEE ZHENG YAO DANIEL

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EDUCATION

National University of Singapore

Aug 2020 – May 2024

Bachelor of Science (Hons): Data Science and Analytics, and Computer Science

- **Special Interdisciplinary Program:** University Town College Programme, Residential College 4
- **Notable Courses:** Machine Learning and Artificial Intelligence, Natural Language Processing, Software Engineering, Algorithms, Data Visualization and Analytics, Parallel Computing, Systems Thinking and Dynamics

SKILLS

Languages: Python, Java, R, SQL, C

Technologies and Tools: Amazon Web Services (EC2, ECS, Lambda, CodeCommit, CodePipeline, ElastiCache etc.), Git, Docker, PostgreSQL, Vensim, Supabase, Hadoop, Flink, Apache Spark, Microsoft Project Online, Redis

Machine Learning: LangChain, Prompt Engineering, PyTorch, TensorFlow, HuggingFace, ScikitLearn, RasterVision, OpenAI, Anthropic, SparkML

Data Science and Analytics: Matplotlib, Pandas, Numpy, RasterVision, PowerBI, PowerQuery, QGIS, Google Earth Engine, GGplot, Geopandas, Folium, GDAL, LeafMap

Soft Skills: Leadership, Teamwork, Problem Solving, Effective Communication, Critical Thinking

EXPERIENCE

Nika.eco

Singapore, SG

Machine Learning Engineer Intern

May 2023 – Dec 2023

- Collaborated with team to develop CarbonGPT, a chatbot interface powered by Generative AI with integrations such as Document question answering, internet search, and carbon market finetuning to automate and multiply carbon workflow.
- Spearheaded R&D for generative AI models, pioneering the use of Retrieval-Augmented Generation (RAG) and state-of-the-art (SoTA) NLP techniques
- Geospatial Analysis: Designed and deployed competitive mangrove classifier, biomass, deforestation prediction models and pipeline using GIS satellite data, achieving an accuracy rate of 96%
- Assisted in front-office operations by creating consultant integrity reports for carbon projects, contributing to an estimated 30% increase in revenue

EastSpring Investments

Singapore, SG

Software Engineering Intern – Information Technology

May 2022 – Aug 2022

- Automated a project management platform, leveraging on Microsoft Project Online and Cloud Tools, reducing manual work by 50%, and data inconsistencies by 80%
- Designed and curated an interactive real time dashboard to improve project oversight, which was well received by management and enhanced decision making

National University of Singapore

Singapore, SG

Teaching Assistant – CS1010S Programming Methodology

Aug 2021 – Aug 2022

- Taught tutorials and graded assignments on programming methodology with Python as a medium
- Tutoring efforts resulted in an overall student average score of 77.9%, placing 5th amongst 60 tutors
- Achieved average teaching feedback score of 4.9/5.0, above department average of 4.4

PROJECTS

Natural Language Processing

Mar 2023

- Created sentiment classifiers using various machine learning models, such as DANs, achieving an accuracy of 92% on movie reviews
- Developed POS taggers using a Hidden Markov Model and the Viterbi Algorithm
- Create transformer based generative AI for language modeling
- Implement novel machine learning approach using curriculum learning and dataset cartography
- Worked on mitigating data artifacts in the SNLI dataset for the Natural Language Inference (NLI) task

Software Engineering: InternConnect

Nov 2022

- Developed a java based desktop application for managing internship applicants, optimized for CLI use

LTA: Traffic Condition Dashboard

Oct 2022

- Worked in backend of a full stack development team to create a traffic condition dashboard
- Designed a robust microservices architecture and implemented machine learning models that improved traffic condition detection by 80%.

Machine Learning: Fall Detection

Apr 2022

- Implemented fall detection software using an Optical flow Convolution Neural Network, achieving a detection accuracy of 87%

Data Science Competition: Computer Vision

Apr 2021

- Utilized computer vision to identify condition and count of computer chips in manufacturing using Python's OpenCV librar, achieving a 91% accuracy rate

CO-CURRICULAR ACTIVITIES AND INTERESTS

Leadership Positions

Project Director	RC4 Freshmen Orientation Camp
Captain	TeamNUS Fencing
Captain	RC4cue, Cue-sports
Member	College Committee, Clubs and Societies
Member	RC4 Open Day Publicity Committee
Member	Inter-College Games Organizing Committee
Member	House Committee, Events

Additional Information

Languages: English, Mandarin and Elementary Japanese

Interests: Passionate about Badminton, Fencing, and keeping abreast of developments in Artificial Intelligence