Lim Jing Kai Joel

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EDUCATION

Singapore Management University   **Aug 2023 – Present**
BSc. (Computer Science), Artificial Intelligence Track
- GPA: 4.21 / 4.0 (Summa Cum Laude)
- Recipient of the Global Impact Scholarship Award, SMU's premier flagship scholarship
- Top scorer for CS101 (Programming Fundamentals I) under Prof. Jason Chan
- Teaching assistant for Java programming language

NUS High School of Mathematics and Science   **Jan 2014 – Nov 2019**
Honours in Mathematics, Majors in Physics, Biology, and Chemistry
- GPA: 4.8 / 5.0 (High Distinction)
- A+ for 12 of 13 Mathematics modules, with an A in the remaining module
- Awarded the Leadership Commendation Award and Outstanding Service Award

HACKATHONS

Alibaba Global E-Commerce Challenge: Alibaba's Flagship AI Hackathon   **Aug 2024 – Sep 2024**
- **Awarded first place globally**, putting Singapore's name on the global AI innovation stage
- Flew to Hangzhou, China for the final round against international teams, including Masters graduates
- Built all machine learning models myself, referencing the latest machine learning research
- Created **AliAdapt**, an AI-powered system for global export compliance, featuring a product attribute extraction model, a modular neural network for product classification, and a retrieval augmented chatbot for export compliance queries
- Featured by Chinese news agencies

TikTok TechJam Hackathon   **Jun 2024**
- Utilised a support vector machine (SVM), large language model (LLM), and transformer-based video captioning models to improve the search function of TikTok
- Increased search relevance for question-based queries from about 25% to 80%
- Processed data and tuned hyperparameters for training of machine learning models
- Deployed a working prototype of a TikTok clone app using React and Vercel

PROJECT EXPERIENCE

Photobooth-CV   **Jul 2024**
Model that changes the background and style of any single-person or group photos uploaded on the web application
- Leverages panoptic segmentation model, DETR-ResNet50, to identify foreground pixels
- Adapted Aleksa Gordić's PyTorch DeepDream implementation for style transform, with hyperparameters tuned
- Deployed using Docker and AWS EC2
- Showcased at multiple university events (Metamorphosis 2024, Vivace 2024, SMUBIA Sessions 2024)

AI Job Application Assistant   **Jan 2024 – Mar 2024**
Model that matches input user's resume to the most suitable current online job listings on the web application
- Processed data through Natural Language Processing (NLP) techniques
- Uses an ensemble of TF-IDF and transformer-based embedding models to store information in job descriptions and resumes in a vector space, capturing underlying meaning of words
- Deployed using Docker and AWS EC2, produced using Python and Flask

WORK EXPERIENCE

DSO National Laboratories: *Research Engineering Intern*   **Mar 2018 – Mar 2019**
- Wrote a research paper comparing scan performances of multifocal reflectarray antennae
- Utilised GNU Octave, AutoCAD, and CST Microwave Studio
- Clinched awards in SG Science and Engineering Fair and NUSHS Research Congress

Singapore Armed Forces, 9th Division: *National Service (Full-time)*   **Jan 2020 – Nov 2021**
- Employed data analytics and visualisation to optimise officer rank promotion decisions
- Led the branch through a secondary appointment of branch representative

CO-CURRICULAR ACTIVITIES

10th Data Associates Programme: *Head*   **Apr 2024 - Apr 2025**
- Leading SMU's flagship machine learning academic programme, which produces 10 fully-functional machine learning projects, with incubation opportunities
- Designed a curriculum of 10 interactive co-learning lectures of topics from neural networks to transformers and advanced computer vision (CV)
- Orchestrated recruitment and interviewing of mentors and associates, obtaining sponsorships from companies, advising projects groups, marketing, admin, finance, etc.
- Fuelled by my passion in data science, to offer machine learning enthusiasts in SMU from all faculties an avenue to learn and build a project under mentorship

9th Data Associates Programme: *Senior Data Associate*   **Jan 2024 – Mar 2024**
- Developed the AI Job Application Assistant under mentorship of industry professionals
- Refined machine learning knowledge through weekly 3-hour lectures for a semester

SMUX Biking: *Vice-president and Training IC*   **Jan 2024 – Jan 2025**
- Oversaw internal operations (management, finance, logistics, administrative matters, and marketing) of the club comprising hundreds of members
- Led regular biking events for a vibrant student life in SMU

The Mentoring Circle: *Mentee, 7th Circle*   **May 2023 – May 2024**

TECHNICAL SKILLS

Programming and Query Languages: Python, Java, C, SQL
Machine Learning Libraries/Frameworks: PyTorch, TensorFlow, Scikit-learn, Keras
Models: Neural Networks, Transformers, Large Language Models, Vision Models, Support Vector Machines
Cloud and Deployment: AWS EC2, Docker, Streamlit, Flask
Version Control and Software Development Frameworks: Git, GitHub, Agile (Scrum), Jira, Sprint Planning, Spring Boot

COURSE CERTIFICATIONS

Python – University of Michigan	PostgreSQL – University of Colorado Boulder
Tableau Software – Duke University	Multivariate Calculus for Machine Learning – Imperial College London
AWS Certified Solutions Architect Associate (In progress)	AWS Certified Machine Learning Specialty (In progress)