CHENG YING XUAN

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EDUCATION

Bachelor of Science (Information Systems), Singapore Management University　　　2021 – 2025
- Majoring in Business Analytics
- Relevant Modules: Machine Learning, Data Mining, Information Retrieval, Big Data, Analytics Foundation, Intro to AI
- Graduating GPA 3.52 / 4

Diploma in Environmental Water Technology, Ngee Ann Polytechnic　　　2016 - 2019
- Graduated as the Silver medalist

WORK EXPERIENCE

Data Scientist Intern　　　Jan 2025 – Present
TE Connectivity
- Developed a multi-stage pipeline to predict PCB board Signal Integrity test results from component measurements
- Trained YOLO models to segmentize ports & components to extract measurements
- Fine-tuned the Unet-EfficientNet model with CAD images to improve accuracy & IoU for residue detection

Data Analyst Intern　　　Sep – Dec 2024
Shopee
- Craft & schedule SQL queries to pull relevant metrics across multiple regions
- Built Dashboards to track feature's post-launch performance.
- Conducts root cause analysis when operation performance fluctuates

Research Intern　　　May – July 2023
Twimbit
- Conducted sanitization of documents and tested ChatGPT integrated bot.
- Assisted with research on Customer Service of APAC Telco companies.
- Conducted focus group discussions, carried out web scraping and sentiment analysis on various brands for Gen Z article

Teaching Assistant　　　Jan – Nov 2023
Singapore Management University
- Subjects: Web Application Development, AI & Humanity, Business Process Analysis & Solutioning
- Mentored chatbots project for AI and Humanity.
- Created Excel marco to reduce time taken to record class participation
- Assist in clerical matters (grouping, quizzes, exams). Help students with HTML and PHP programming for WAD.

SKILLS

Software: Tableau, Excel, Word, PowerPoint, Figma
Programing Languages: Python, SQL, Java, JS (React, Vue), PHP, HTML, CSS (Bootstrap)
Data Science Libaries: Tensorflow, Keras, Sklearn, Scikit-learn, Pandas, Matplotlib, Seaborn
Certifications:
- AI200: Applied Machine Learning by Heicoders Academy
- Oracle Certified Foundations Associate (Object Orientated Programming)

PROJECTS

Urban Forms Gen AI (Final Year Project)   Aug – Nov 2024
- Trained Graph VAE models on HDB shapefiles to generate potential HDB layouts.
- Fine-tuned hyperparameters & loss function to produce better results
- Utilized linear programming to find optimal building size & floor for specified density
- Project Outline: Urban Forms Gen AI

Artwork DeepFake Detection   Jan – Mar 2025
- Developed a computer vision model to detect inpainting in artwork using CNN, ResNet50, and EfficientNet architectures.
- Comparative analysis revealed CNN as the top-performing model
- Enhanced CNN accuracy by 6% by replacing sigmoid final layer with SVM classifier, achieving 78% final accuracy.
- Repo Link: ArtWorkDeepFakeDetection

SCDF-Dell hackathon 'Lifesavers' Innovation Challenge 2024 (Top 3)   May – Jul 2024
- Proposed tracking band that records firefighter's vitals to a dashboard in real time.
- Use LSTM model to predict risk of heart attack, heat stroke, etc.
- Coded the frontend using React. Built the ML and IoT microservices and deployed the project on Openshift.
- Link: GetHelp_Presentation.ppt

CO-CURRICULAR ACTIVITY AND COMMUNITY SERVICE

Feb 2023 – Jun 2023   **Finance Secretary (Project Sunshine)**
Assisted in finance matters for overseas trip to Laos. Did construction work and taught English & Math to primary and secondary school kids

Sep 2022 – Dec 2022   **Mentor (Project Heartcode)**
Mentoring secondary school kids. Taught web development (JS, HTML, CSS) and helped them build a website.

Dec 2021 – April 2022   **Volunteer (KidsCount)**
Come up with engaging lesson materials. Tutored lower income primary school kids math