

# CHENG YING XUAN

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## EDUCATION

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Bachelor of Science (Information Systems), Singapore Management University	2021 – 2025
<ul style="list-style-type: none"><li>▪ Majoring in Business Analytics</li><li>▪ Relevant Modules: Machine Learning, Data Mining, Information Retrieval, Big Data, Analytics Foundation, Intro to AI</li><li>▪ Graduating GPA 3.52 / 4</li></ul>	
Diploma in Environmental Water Technology, Ngee Ann Polytechnic	2016 - 2019
<ul style="list-style-type: none"><li>▪ Graduated as the Silver medalist</li></ul>	

## WORK EXPERIENCE

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<b>Data Scientist Intern</b> <b>TE Connectivity</b> <ul style="list-style-type: none"><li>• Developed a multi-stage pipeline to predict PCB board Signal Integrity test results from component measurements</li><li>• Trained YOLO models to segmentize ports &amp; components to extract measurements</li><li>• Fine-tuned the Unet-EfficientNet model with CAD images to improve accuracy &amp; IoU for residue detection</li></ul>	Jan 2025 – Present
<b>Data Analyst Intern</b> <b>Shopee</b> <ul style="list-style-type: none"><li>• Craft &amp; schedule SQL queries to pull relevant metrics across multiple regions</li><li>• Built Dashboards to track feature's post-launch performance.</li><li>• Conducts root cause analysis when operation performance fluctuates</li></ul>	Sep – Dec 2024
<b>Research Intern</b> <b>Twimbit</b> <ul style="list-style-type: none"><li>• Conducted sanitization of documents and tested ChatGPT integrated bot.</li><li>• Assisted with research on Customer Service of APAC Telco companies.</li><li>• Conducted focus group discussions, carried out web scraping and sentiment analysis on various brands for Gen Z article</li></ul>	May – July 2023
<b>Teaching Assistant</b> <b>Singapore Management University</b> <ul style="list-style-type: none"><li>• Subjects: Web Application Development, AI &amp; Humanity, Business Process Analysis &amp; Solutioning</li><li>• Mentored chatbots project for AI and Humanity.</li><li>• Created Excel marco to reduce time taken to record class participation</li><li>• Assist in clerical matters (grouping, quizzes, exams). Help students with HTML and PHP programming for WAD.</li></ul>	Jan – Nov 2023

## SKILLS

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**Software:** Tableau, Excel, Word, PowerPoint, Figma

**Programing Languages:** Python, SQL, Java, JS (React, Vue), PHP, HTML, CSS (Bootstrap)

**Data Science Libraries:** Tensorflow, Keras, Sklearn, Scikit-learn, Pandas, Matplotlib, Seaborn

**Certifications:**

- AI200: Applied Machine Learning by Heicoders Academy
- Oracle Certified Foundations Associate (Object Orientated Programming)

## PROJECTS

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### Urban Forms Gen AI (Final Year Project)

Aug – Nov 2024

- Transformed HDB shapefiles into graphs using canonical spatial transform
- Trained Graph VAE models on HDB graphs 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](#)

### Ray of Hope Dashboard

Jan – Mar 2025

- Built an interactive data visualization dashboard using D3.js and React to analyze charitable campaign performance
- Implemented web scraping with BeautifulSoup to collect and process data from multiple crowdfunding platforms
- Created customizable filters to enable comparative analysis between Ray of Hope and competitor organizations
- Dashboard Link: [RoH Dabsboard](#)

### 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

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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