

# Nguyen Tien Dat

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## EDUCATION

### Nanyang Technological University (NTU)

Aug 2022 - Aug 2027

*Bachelor of Engineering in Computer Science & Bachelor of Social Sciences in Economics*  
*ASEAN Scholarship Recipient*

### Hwa Chong Institution (HCI)

Feb 2020 - Dec 2021

*AAAB/A in H2 Mathematics, H2 Physics, H2 Economics, H2 Chemistry and H1 General Paper, with Pass in H3 Semiconductor Physics and Devices (88.75 RP)*

## TECHNICAL SKILLS

**Skills:** SQL, PostgreSQL, Postman, API Development, Praat, Audacity

**Languages:** Python, C, HTML, CSS, Javascript, Django, Jupyter, Java, C++

**Libraries:** TensorFlow, PyTorch, Keras, Bootstrap, Alembic, SQLAlchemy, Scikit

## WORK EXPERIENCE

### A\*STAR Institute of Infocomm (I2R)

Apr 2023 - Aug 2023

*Natural Language Processing (NLP) Intern*

- Data collection through web scraping using **Beautiful Soup** and **Selenium** and data processing using **Python**
- Performed **Singing Voice Synthesis (SVS)** using **Shallow Diffusion Mechanism** for Mandarin and Vietnamese songs. Audio processed using **Praat**, **BasicPitch** and **Omnizart** for comparison.
- Implemented **HiFi-GAN** and pre-trained **vocoder** into SVS experiment.
- Prepare **JSON** dataset (13,000 QnA pairs) using **GPT** API through scraped travel website (LonelyPlanet) to create a chatbot which specializes in travel within Vietnam, using open source LLM Falcon.
- Evaluating QnA models e.g **LLAMA**, **Alpaca**, **Falcon**, **s-BERT** to implement chatbot.

### Lee Kong Chian School of Medicine (LKCSOM)

May 2023 - Aug 2023

*IT Support Specialist*

- Basic troubleshooting of IT equipment e.g projectors, AV system and monitors.
- Imaging of Ipads and laptops for loan, installation of required software.
- Weekly AV checks and inventory management.

## PROJECTS

- **Telegram Chatbot (July 2023):** Used **Telegram API** and **Python** to code a chatbot for Wee Kim Wee School of Communications. It's designed to collect anonymous feedback from students at the freshman orientation camp. Used **cygwin** for linux env, **tmux** and **dos2unix** to allow the bot to run continuously.
- **Blog Website (May 2023):** Recreate a blog similar to Reddit which has interactive features e.g login, register, post and delete blogs, password reset etc in **Django**. Furthermore, it was also replicated in **Flask**.
- **Fake News Analysis (Apr 2023):** Improvised on machine learning algorithms e.g Naive-Bayes Model and Random Forest Classifier that can accurately discern fake news from real news and analyze the factors that differentiate them such as K-fold accuracy.
- **Premier League Table Prediction (Apr 2023) :** Improvised on machine learning algorithms e.g Linear Regression, Neural Network and Random Forest Regression to predict the outcome of future matches based on outcomes of previous matches (2000-2017) and the important factors affecting the outcomes.
- **France Travel Website (Dec 2022):** Created an animated, informative and user-friendly website using **HTML** and **CSS** in French about my Winter Language Immersion Program (LIP) to France, organized by NTU and the University of Franche-Comté.