

# Willy Chung

## Engineering Graduate

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French engineer graduated with a Master of Engineering in applied mathematics and a Master of Philosophy in NLP, with a specific interest in machine learning and data science. With a track-record of publications in NLP conferences, I am passionate about unifying state-of-the-art scientific research with actionable engineering usage to develop products and services. Currently looking for a data science position in which I can learn and grow

### EDUCATION

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| <b>Hong Kong University of Science and Technology</b><br><i>Master of Philosophy - Electronic and Computer Engineering - AI/NLP</i> | <b>Clear Water Bay, Hong Kong</b><br>09.2021 - 08.2023 |
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- Thesis: Instruction-Tuned Large Language Models for Zero-Shot Task-Oriented Dialogue Systems
  - Relevant Courses: Advanced Deep Learning Architecture, Statistical Learning for Text and Graph Data, Advanced Topics in AI and Healthcare
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| <b>CentraleSupélec, Paris-Saclay University</b><br><i>Master of Engineering - Applied Mathematics</i> | <b>Gif-sur-Yvette, France</b><br>09.2017 - 09.2021 |
|---|--|
- GPA 3.97/4.33 - Relevant Courses: Optimization, Model Representation and Analysis, Algorithmic & Complexity, Massive Data Management, Parallel and Distributed Programming, Automation, High Performance Computing

### RESEARCH & PROJECTS

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|--|-----------------------------------|
| <b>Center for Artificial Intelligence Research (HKUST)</b> | <b>Clear Water Bay, Hong Kong</b> |
|--|-----------------------------------|
- **Large Language Model Evaluation** [\[publication\]](#) 12.2022 - 04.2023
    - Collaborated to evaluate ChatGPT's capabilities in dialogue, reasoning, and multimodal understanding
    - Conducted experiments for task-oriented dialogue systems and co-authored the scientific publication
  - **Virtual Well-being Companion with Emotion Detection Capability for Elderly People** 06.2022 - present
    - Designed an anthropomorphic virtual chatbot for elderly individuals in community care.
    - Investigated cross-age and cross-lingual transferability for elderly speech emotion recognition [\[publication\]](#)
  - **Grace, Humanoid Robot as Occupational Therapist for Hospitals** 02.2022 - present
    - Collaborated as the NLP group with three teams (Robotics, HCI, CV) to develop the system architecture
    - Developed the dialogue module for the robot to conduct a cognitive questionnaire with hospital patients
    - Collected and processed unstructured speech-to-text interaction feedback data for system evaluation
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| <b>Mechanics, Soils, Structures and Materials Laboratory (CentraleSupélec)</b> | <b>Gif-sur-Yvette, France</b> |
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- **AI-aided asteroseismology: reproducing gravitational waves** 09.2020 - 04.2021
    - Explored the automatic generation of gravitational waves using RNN and LSTM
    - Implemented a GAN-based adversarial learning method for joint distribution matching for unidimensional data

### WORK EXPERIENCE

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| <b>Hong Kong University of Science and Technology</b><br><i>Teaching Assistant (ELEC1200 - 80 students, ELEC6910Y - 18 students)</i> | <b>Clear Water Bay, Hong Kong</b><br>01.2022 - 06.2023 |
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- Designed and graded two NLP assignments on word embeddings and transformer models.
  - Delivered three tutorial sessions on neural network (text classification and generation using BERT and GPT-2)
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| <b>Coffreo</b><br><i>Data Science Student Intern</i> | <b>Paris, France</b><br>03.2020 - 07.2020 |
|--|---|
- Processed and analyzed 4.000.000+ real-world data features for temporary worker agency
  - Implemented ARIMA, SVM and RF models for time series forecasting to predict the demand of workers
  - Developed an interactive choropleth map for feature visualization across regions to aid strategic decision-making

### SKILLS

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**Languages:** French (native), English (fluent), Cantonese (native), Chinese (Intermediate) - IELTS: 8.5/9  
**Programming:** Python (pandas, scikit-learn, pytorch, huggingface), R, SQL, MATLAB  
**Software:** Power BI, Azure, Docker, Github, MongoDB, Neo4j, SolidWorks, Dialogflow  
**Voluntary work:** Secondary Reviewer for EMNLP 2022 | Secretary of CosmiCS, Astronomy Student Association

### GRANTS & AWARDS

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INTERSPEECH Travel Grant (2023) | Postgraduate Studentship (2021-2023) | International Mobility Grant (2021)