Willy Chung

Engineering Graduate

Paris, France | +(852) 9198 0029 | willyhc22.github.io
linkedin.com/in/willyhcchung | willy.chung75@gmail.com | Google Scholar

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

Hong Kong University of Science and Technology — ***Clear Water Bay, Hong Kong***
Master of Philosophy - Electronic and Computer Engineering - AI/NLP — 09.2021 - 08.2023

- 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

CentraleSupélec, Paris-Saclay University — ***Gif-sur-Yvette, France***
Master of Engineering - Applied Mathematics — 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

Center for Artificial Intelligence Research (HKUST) — **Clear Water Bay, Hong Kong**

➢ **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
- Presented our accepted publication for oral presentation at INTERSPEECH 2023, Ireland. **[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

Mechanics, Soils, Structures and Materials Laboratory (CentraleSupélec) — **Gif-sur-Yvette, France**

➢ **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

Hong Kong University of Science and Technology — **Clear Water Bay, Hong Kong**
Teaching Assistant (ELEC1200 - 80 students, ELEC6910Y - 18 students) — 01.2022 - 06.2023

- 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)

Coffreo — **Paris, France**
Data Science Student Intern — 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

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

GRANTS & AWARDS

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