Kuan-Yu Chen

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EDUCATION

Brandeis University, Waltham, MA   Aug. 2018 – May 2020
Master of Science in Computer Science
Capstone Project for Software Engineering, Database Management Systems, Big Data Analysis, Natural
Language Processing Systems, Information Retrieval, Computational Molecular Biology
National Taiwan University (NTU), Taipei, Taiwan
Bachelor of Science in Life Science (Biology)   Sept. 2010 – June 2014
Language Technologies and Computational Linguistics, Biostatistics

COURSE PROJECTS   https://github.com/chenky0401/

Twitter-like Service Platform [Ruby on Rails, Heroku]
- Build and deploy a MVC architecture based web application with user authentication.
- Design and implement ORM and database architecture using ActiveRecord and PostgreSQL.
- Write functional, unit, and integration tests for quality assurance and test-driven development.
- Manage the project with Scrum-like agile framework with a team of 4.

Information Retrieval System for TED [Python, Flask, ElasticSearch]
- Built IR system that supports multi-field search on TED talks using ElasticSearch and Flask.
- Designed a TF-IDF based recommendation system and incorporated with multimedia results (video, Youtube comments, word cloud, etc.)

Non-Neural Named Entity Extractor [Python, pycrfsuite]
- Built NER system with Brown clusters and word embeddings features on CoNLL 2003 English data.
- Analyzed performance with different feature set configurations and achieved overall F1 score of 92.5.

Stochastic Simulation of Virus Population Dynamics [Python, Flask]
- Modeled and visualized patient receiving treatments and drug resistant virus in object-oriented way.
- Implemented backend server with Python Flask and interactive web GUI using simple Ajax.

Circuit Parsing and Optimization [C++]
- Created circuit parsers that construct And-Inverter Graphs (AIGs) from description files.
- Optimized circuits using post-order DFS and constant propagation.

EXPERIENCE

Graduate Teaching Assistant, Brandeis University   Sept. 2019 – Dec. 2019
Introduction to Natural Language Processing with Python
- Hold weekly office hours to help students strengthen their Python skill and graded assignments.

Freelance Professional English/Mandarin Interpreter, Taipei, Taiwan   Sept. 2015 – May 2018
- Collaborated with professionals from diverse industrial and cultural backgrounds.
- Provided consecutive and simultaneous interpretation services at technology conferences.

Mandatory Military Service, Taipei, Taiwan   Oct. 2014 – Sept. 2015
Tri-Service General Hospital
- Assisted with the management of the Post-Graduate-Year Medical Training Program.

SKILLS

Programming languages: Python, Ruby, Java, C++, SQL, HTML5, CSS
Technical skills: Linux, Git, GitHub, Rails, Heroku, Flask, Apache Spark, NLTK, ElasticSearch
Languages: English (near native), Mandarin (native), Spanish & Taiwanese (conversational)

HONORS AND AWARDS

Spring Table Tennis Open U1800 2nd Place, Boston University   April 2019
International Youth Ambassadors of Taiwan, Ministry of Foreign Affairs   July 2014